Alan C. Lloyd, Ph.D.
Agency Secretary

California Regional Water Quality Control Board

Central Valley Region

Sacramento Main Office
11020 Sun Center Drive #200
Rancho Cordova, CA 95670-6114
Phone (916) 464-3291 • Fax (916) 464-4645
http://www.waterboards.ca.gov

Arnold Schwarzenegger
Governor

ORDER NO. R5-2005-0080
NPDES NO. CA0085120

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Tsar Nicoulai Caviar, LLC, and the Ralph F. Nix 1995 Revocable Trust
Name of Facility	Tsar Nicoulai Sturgeon Farm, Wilton
Facility Address	10822 Gay Road
	Wilton, CA 95693
	Sacramento County

The Discharger is authorized to discharge from the following discharge points as set forth below:

Discharge Point	Effluent Description	Discharge Point Latitude	Discharge Point Longitude	Receiving Water
001	Aquacultural Wastewater	38º, 24', 03" N	121º, 16', 53" W	Unnamed Tributary of the Cosumnes River

This Order was adopted by the Regional Water Board on:	**24 June 2005**
This Order shall become effective on:	**24 June 2005**
This Order shall expire on:	**1 June 2010**
The U.S. Environmental Protection Agency (USEPA) and the Regional Water Board have classified this discharge as a minor discharge.	
The Discharger shall file a Report of Waste Discharge in accordance with Title 23, California Code of Regulations, not later than 180 days in advance of the Order expiration date as application for issuance of new waste discharge requirements.	

IT IS HEREBY ORDERED, that in order to meet the provisions contained in Division 7 of the California Water Code (CWC) and regulations adopted thereunder and the provisions of the federal Clean Water Act (CWA), and regulations and guidelines adopted thereunder, the Discharger shall comply with the requirements in this Order.

I, Thomas R. Pinkos, Executive Officer, do hereby certify the following is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on **24 June 2005**.

_____
Thomas R. Pinkos, Executive Officer

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
REGION 5, CENTRAL VALLEY REGION

ORDER NO. R5-2005-0080
NPDES NO. CA0085120

TABLE OF CONTENTS

I. FACILITY INFORMATION

The following Discharger is authorized to discharge in accordance with the conditions set forth in this Order:

Discharger	Tsar Nicoulai Caviar, LLC, the Ralph F. Nix 1995 Revocable Trust
Name of Facility	Tsar Nicoulai Sturgeon Farm, Wilton
Facility Address	10822 Gay Road
	Wilton, CA 95693
	Sacramento County
Facility Contact, Title, and Phone	Jerry Schwartz, General Manager, (415) 543-3007
Mailing Address	60 Dorman Avenue, San Francisco, CA 94124
Type of Facility	Concentrated Aquatic Animal Production/ Fish Hatchery (CAAP Facility)
Facility Design Flow	Not Applicable

II. FINDINGS

The California Regional Water Quality Control Board, Central Valley Region (hereinafter Regional Water Board), finds:

A. **Background.** Tsar Nicoulai Caviar, LLC submitted a complete Report of Waste Discharge (RWD), except for meeting California Environmental Quality Act requirements, dated October 12, 2004**,** and applied for a National Pollutant Discharge Elimination System (NPDES) permit authorization to discharge up to 3.1 million gallons per day (mgd) of treated wastewater from the Tsar Nicoulai Sturgeon Farm. The application was deemed complete on December 23, 2004. Tsar Nicoulai Caviar, LLC currently leases some of the land that houses a portion of the facility from the Ralph F. Nix 1995 Revocable Trust. Together Tsar Nicoulai Caviar, LLC and the Ralph F. Nix 1995 Revocable Trust are hereinafter referred to as Discharger.

B. **Facility Description.** The Discharger owns and operates a fish farm. The treatment system consists of filtration, an aquatic vegetation pond for nutrient uptake, and a biofiltration system for ammonia and dissolved organics removal. Wastewater is discharged from Discharge Point 001 (see table on cover page) to the Sacramento County storm drain system, which flows to an unnamed tributary of the Cosumnes River, and is ultimately discharged to the Cosumnes River, a water of the United States within the North Valley Floor Hydrologic Unit. Attachment B provides a topographic map of the area around the Facility. Attachment C provides a flow schematic of the Facility.

C. **Legal Authorities.** This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

D. **Background and Rationale for Requirements**. The Regional Water Board developed the requirements in this Order based on information submitted as part of the application, through monitoring and reporting programs, and through special studies. Attachments A through I, which contain background information and rationale for Order requirements, are hereby incorporated into this Order and, thus, constitute part of the Findings for this Order.

E. **California Environmental Quality Act (CEQA).** The Regional Water Board has considered the Negative Declaration on DATE, and compliance with the requirements of this Order will mitigate or avoid the significant impacts to water quality.

F. **Technology-based Effluent Limitations.** The Code of Federal Regulations (CFR) at 40 CFR Section 122.44(a) requires that permits include applicable technology-based limitations and standards. This Order includes technology-based effluent limitations based on Effluent Limitations Guidelines and Standards for the Aquatic Animal Production Industry Category in 40 CFR 451 through the application of best available technology economically achievable (BAT) and the best conventional technology (BCT). A detailed discussion of the technology-based effluent limitations development is included in the Fact Sheet (Attachment F).

G. **Water Quality-based Effluent Limitations.** Section 122.44(d) of 40 CFR requires that permits include water quality-based effluent limitations (WQBELs) to attain and maintain applicable numeric and narrative water quality criteria to protect the beneficial uses of the receiving water. Where numeric water quality objectives have not been established, 40 CFR Section 122.44(d) specifies that WQBELs may be established using USEPA criteria guidance under CWA section 304(a), proposed State criteria or a State policy interpreting narrative criteria supplemented with other relevant information, or an indicator parameter.

H. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan.

The Basin Plan at page II-2.00 states that the beneficial uses of any specifically identified water body generally applies to its tributary streams. The Basin Plan does not specifically identify beneficial uses for the unnamed tributary of the Cosumnes River, but does identify present and potential uses for the Cosumnes River, to which the unnamed tributary of the Cosumnes River is tributary. These beneficial uses are municipal and domestic supply (MUN); agricultural supply, irrigation and stock watering (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning (SPWN); wildlife habitat (WILD). In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, as discussed in detail in this Fact Sheet, beneficial uses applicable to the unnamed tributary of the Cosumnes River are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Unnamed Tributary of the Cosumnes River	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD.

Requirements of this Order specifically implement the applicable Water Quality Control Plans.

I. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

J. **State Implementation Policy.** On March 2, 2000, State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP). The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test

procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The SIP includes procedures for determining the need for and calculating WQBELs and requires dischargers to submit data sufficient to do so.

K. **Compliance Schedules and Interim Requirements. Not applicable, new source discharge.**

L. **Antidegradation Policy.** Section 131.12 of 40 CFR requires that State water quality standards include an antidegradation policy consistent with the federal policy. The State Water Board established California's antidegradation policy in State Water Board Resolution 68-16, which incorporates the requirements of the federal antidegradation policy. Resolution 68-16 requires that existing quality of waters be maintained unless degradation is justified based on specific findings. As discussed in detail in the Fact Sheet (Attachment F) the permitted discharge is consistent with the antidegradation provision of 40 CFR Section 131.12 and State Water Board Resolution 68-16.

M. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and federal regulations at 40 CFR Section 122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require effluent limitations in a reissued permit to be as stringent as those in the previous permit, with some exceptions where limitations may be relaxed. This is a new NPDES permit; therefore anti-backsliding provisions do not apply.

N. **Monitoring and Reporting.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program establishes monitoring and reporting requirements to implement federal and State requirements. This Monitoring and Reporting Program is provided in Attachment E.

O. **Standard and Special Provisions.** Standard Provisions, which in accordance with 40 CFR Sections 122.41 and 122.42 apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D. The Regional Water Board has also included in this Order special provisions applicable to the Discharger. A rationale for the special provisions contained in this Order is provided in the attached Fact Sheet (Attachment F).

P. **Notification of Interested Parties.** The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe Waste Discharge Requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations. Details of notification are provided in the Fact Sheet (Attachment F) of this Order.

Q. **Consideration of Public Comment.** The Regional Water Board, in a public meeting, heard and considered all comments pertaining to the discharge. Details of the Public Hearing are provided in the Fact Sheet (Attachment F) of this Order.

R. **Finding for no More Stringent than Federal Law.** This Order contains restrictions on individual pollutants that are no more stringent than required by the federal Clean Water Act. Individual pollutant restrictions consist of technology-based restrictions and water quality-based

effluent limitations. Technology based effluent limitations consist of best management practices to control BOD_5 and TSS. Water quality-based effluent limitations have been scientifically derived to implement water quality objectives that protect beneficial uses. Both the beneficial uses and the water quality objectives have been approved pursuant to federal law and are the applicable federal water quality standards. To the extent that toxic pollutant water quality-based effluent limitations were derived from the California Toxics Rule, the California Toxics Rule is the applicable standard pursuant to 40 C.F.R. 131.38. The scientific procedures for calculating the individual water quality-based effluent limitations are based on the CTR-SIP, which was approved by USEPA on May 1, 2001. All beneficial uses and water quality objectives contained in the Basin Plan were approved under state law and submitted to and approved by USEPA prior to May 30, 2000. Any water quality objectives and beneficial uses submitted to USEPA prior to May 30, 2000, but not approved by USEPA before that date, are nonetheless "applicable water quality standards for purposes of the [Clean Water] Act" pursuant to 40 C.F.R. 131.21(c)(1). Collectively, this Order's restrictions on individual pollutants are no more stringent than required to implement the technology-based requirements of the Clean Water Act and the applicable water quality standards for purposes of the Clean Water Act.

III. DISCHARGE PROHIBITIONS

A. Discharge of wastewater and solids at a location or in a manner different from that described by this Order is prohibited.

B. The by-pass or overflow of untreated wastewater or wastes into any surface water or surface water drainage course is prohibited, except as allowed by Provision I.A.7 of Attachment D, Federal Standard Provisions.

C. Practices that allow accumulated sludge, grit, and solid residues to be discharged to surface waters or surface water drainage courses are prohibited.

D. Discharge of aquaculture drugs or chemical additives except salt is prohibited.

IV. EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

A. Effluent Limitations – Discharge Point 001

1. Final Effluent Limitations – Discharge Point 001

a. The discharge of aquacultural wastewater shall maintain compliance with the following effluent limitations at Discharge Point 001, with compliance measured at Monitoring Location M-001 as described in the attached Monitoring and Reporting Program (Attachment E):

Parameter	Units	Effluent Limitations			
		Average Monthly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	1.2	3.1	--	--
Total Iron	µg/L	300	--	--	--
	lbs/day	3.0	--	--	--
Total Manganese	µg/L	50	--	--	--
	lbs/day	0.50	--	--	--
Nitrate Nitrogen	mg/L	10	--	--	--
	lbs/day	100	--	--	--
Total Ammonia as N	mg/L	0.59	--	--	--
	lbs/day	5.9	--	--	--
Electrical Conductivity	µmhos/cm	700	--	--	--
pH	standard units	--	--	6.5	8.5

b. The maximum 1-hour average effluent ammonia as N in the discharge shall not exceed 2.1 mg/L or 21 lbs/day.

c. The Discharger shall minimize the discharge of total suspended solids to the BAT/BCT through implementing best management practices established in Special Provision VI.C.3 of this Order.

2. Interim Effluent Limitations – Not Applicable

B. Land Discharge Specifications – Not Applicable

C. Reclamation Specifications – Not Applicable

V. RECEIVING WATER LIMITATIONS

A. Surface Water Limitations

Receiving water limitations are based on water quality objectives contained in the Basin Plan and are a required part of this Order. The discharge shall not cause the following in the unnamed tributary of the Cosumnes River:

1. Bacteria*:* The fecal coliform concentration based on a minimum of not less than five samples for any 30-day period shall not exceed a geometric mean of 200/100 ml, nor shall more than ten percent of the total number of samples taken during any 30-day period exceed 400/100 ml.

2. Dissolved Oxygen: The monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation. The DO concentration shall not be reduced below 7.0 mg/L at any time.

3. Oil and Grease: Oils, greases, waxes, or other materials in concentrations that cause nuisance, result in a visible film or coating on the water surface or on objects in the water, or otherwise adversely affect beneficial uses.

4. Color: Discoloration that causes nuisance or adversely affects beneficial uses.

5. pH: The ambient pH to be depressed below 6.5, nor raised above 8.5, nor changes in normal ambient pH levels to be exceeded by more than 0.5 units. A monthly averaging period may be used for determining compliance with the above 0.5 receiving water pH limitation.

6. Temperature: The natural receiving water temperature to increase more than 5°F.

7. Settleable Matter: Substances in concentrations that result in the deposition of material that causes nuisance or adversely affects beneficial uses.

8. Radioactivity: Radionuclides to be present in concentrations that are harmful to human, plant, animal or aquatic life nor that result in the accumulation of radionuclides in the food web to an extent that presents a hazard to human, plant, animal or aquatic life.

9. Concentrations of radionuclides in excess of the maximum contaminant levels (MCLs) specified in Table 4 (MCL Radioactivity) of Section 64443 of Title 22 of the California Code of Regulations.

10. Toxicity: Toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life. This applies regardless of whether the toxicity is caused by a single substance or the interactive effect of multiple substances.

11. Biostimulatory Substances: Biostimulatory substances which promote aquatic growths in concentrations that cause nuisance or adversely affect beneficial uses.

12. Floating Material: Floating material in amounts that cause nuisance or adversely affect beneficial uses.

13. Sediment: Suspended sediment load and suspended sediment discharge rate altered in such a manner to cause nuisance or adversely affect beneficial uses.

14. Suspended Sediment: Suspended sediment concentrations that cause nuisance or adversely affect beneficial uses.

15. Taste and Order: Taste- or odor-producing substances in concentrations that cause nuisance, adversely affect beneficial uses, or impart undesirable tastes or odors to fish flesh or other edible products of aquatic origin or to domestic or municipal water supplies.

16. Turbidity: Changes in turbidity that cause nuisance or adversely affect beneficial uses. Turbidity attributable to controllable water quality factors to exceed the following:

    a. More than 1 Nephelometric Turbidity Units (NTUs) where natural turbidity is between 0 and 5 NTUs.

    b. More than 20 percent where natural turbidity is between 5 and 50 NTUs.

    c. More than 10 NTUs where natural turbidity is between 50 and 100 NTUs.

    d. More than 10 percent where natural turbidity is greater than 100 NTUs.

17. Pesticides:

    a. Pesticides in individual or combined concentrations that adversely affect beneficial uses.

    b. Pesticide concentrations in bottom sediments or aquatic life that adversely affect beneficial uses.

    c. Total identifiable persistent chlorinated hydrocarbon pesticides in concentrations detectable within the accuracy of analytical methods approved by the Environmental Protection Agency or the Executive Officer.

    d. Concentrations exceeding those allowable by applicable antidegradation policies (see State Water Resources Control Board Resolution No. 68-16 and 40 C.F.R. Section 131.12.)

    e. Concentrations exceeding the lowest levels technically and economically achievable.

    f. Concentrations exceeding the Maximum Contaminant Levels set forth in California Code of Regulations, Title 22, Division 4, Chapter 15.

    g. Concentrations of thiobencarb in excess of 1.0 mg/L.

18. Aquatic communities and populations, including vertebrate, invertebrate, and plant species, to be degraded.

B. Groundwater Limitations

Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not cause groundwater under and beyond the Facility (as determined by an approved well monitoring network) to contain any constituents in concentrations greater than ambient background conditions and shall not cause or contribute to the violation of any Basin Plan narrative or numeric water quality objective.

VI. PROVISIONS

A. Standard Provisions

1. **Federal Standard Provisions.** The Discharger shall comply with all Standard Provisions included in Attachment D of this Order.

2. **Regional Water Board Standard Provisions.** The Discharger shall comply with the following provisions:

   a. If the Discharger's wastewater treatment plant is publicly owned or subject to regulation by the California Public Utilities Commission, it shall be supervised and operated by persons possessing certificates of appropriate grade according to Title 23, California Code of Regulations (CCR), Division 3, Chapter 14.

   b. After notice and opportunity for a hearing, this Order may be terminated or modified for cause, including, but not limited to:

      i. Violation of any term or condition contained in this Order;
      ii. Obtaining this Order by misrepresentation or by failing to disclose fully all relevant facts;
      iii. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge; and
      iv. A material change in the character, location, or volume of discharge.

      The causes for modification include:

      i. New regulations. New regulations have been promulgated under Section 405(d) of the Clean Water Act, or the standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision after the permit was issued.

      ii. Land application plans. When required by a permit condition to incorporate a land application plan for beneficial reuse of sewage sludge, to revise an existing land application plan, or to add a land application plan.

iii. Change in sludge use or disposal practice. Under 40 Code of Federal Regulations (CFR) 122.62(a)(1), a change in the Discharger's sludge use or disposal practice is a cause for modification of the permit. It is cause for revocation and reissuance if the Discharger requests or agrees.

The Regional Water Board may review and revise this Order at any time upon application of any affected person or the Regional Water Board's own motion.

c. If a toxic effluent standard or prohibition (including any scheduled compliance specified in such effluent standard or prohibition) is established under Section 307(a) of the CWA, or amendments thereto, for a toxic pollutant that is present in the discharge authorized herein, and such standard or prohibition is more stringent than any limitation upon such pollutant in this Order, the Regional Water Board will revise or modify this Order in accordance with such toxic effluent standard or prohibition.

The Discharger shall comply with effluent standards and prohibitions within the time provided in the regulations that establish those standards or prohibitions, even if this Order has not yet been modified.

d. This Order shall be modified, or alternately revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 04(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:

i. Contains different conditions or is otherwise more stringent than any effluent limitation in the Order; or

ii. Controls any pollutant limited in the Order.

The Order, as modified or reissued under this paragraph, shall also contain any other requirements of the CWA then applicable.

e. The provisions of this Order are severable. If any provision of this Order is found invalid, the remainder of this Order shall not be affected.

f. The Discharger shall ensure compliance with any existing or future pretreatment standard promulgated by USEPA under Section 307 of the CWA, or amendment thereto, for any discharge to the municipal system.

g. The discharge of any radiological, chemical or biological warfare agent or high-level, radiological waste is prohibited.

h. A copy of this Order shall be maintained at the discharge facility and be available at all times to operating personnel. Key operating personnel shall be familiar with its content.

i. Neither the treatment nor the discharge shall create a condition of nuisance or pollution as defined by the CWC, Section 13050.

j. Safeguard to electric power failure:

i. The Discharger shall provide safeguards to assure that, should there be reduction, loss, failure of electric power, the discharge shall comply with the terms and conditions of this Order.

ii. Upon written request by the Regional Water Board the Discharger shall submit a written description of safeguards. Such safeguards may include alternate power sources, standby generators, retention capacity, operating procedures, or other means. A description of the safeguards provided shall include an analysis of the frequency, duration, and impact of power failures experienced over the past five years on effluent quality and on the capability of the Discharger to comply with the terms and conditions of the Order. The adequacy of the safeguards is subject to the approval of the Regional Water Board.

iii. Should the treatment works not include safeguards against reduction, loss, or failure of electric power, or should the Regional Water Board not approve the existing safeguards, the Discharger shall, within ninety days of having been advised in writing by the Regional Water Board that the existing safeguards are inadequate, provide to the Regional Water Board and USEPA a schedule of compliance for providing safeguards such that in the event of reduction, loss, or failure of electric power, the Discharger shall comply with the terms and conditions of this Order. The schedule of compliance shall, upon approval of the Regional Water Board, become a condition of this Order.

k. The Discharger, upon written request of the Regional Water Board, shall file with the Regional Water Board a technical report on its preventive (failsafe) and contingency (cleanup) plans for controlling accidental discharges, and for minimizing the effect of such events.

The technical report shall:

i. Identify the possible sources of spills, leaks, untreated waste by-pass, and contaminated drainage. Loading and storage areas, power outage, waste treatment unit outage, and failure of process equipment, tanks and pipes should be considered.

ii. Evaluate the effectiveness of present facilities and procedures and state when they became operational.

iii. Predict the effectiveness of the proposed facilities and procedures and provide an implementation schedule containing interim and final dates when they will be constructed, implemented, or operational.

The Regional Water Board, after review of the technical report, may establish conditions, which it deems necessary to control accidental discharges and to minimize the effects of

such events. Such conditions shall be incorporated as part of this Order, upon notice to the Discharger.

l. A publicly owned treatment works (POTW) whose waste flow has been increasing, or is projected to increase, shall estimate when flows will reach hydraulic and treatment capacities of its treatment and disposal facilities. The projections shall be made in January, based on the last three years' average dry weather flows, peak wet weather flows and total annual flows, as appropriate. When any projection shows that capacity of any part of the facilities may be exceeded in four years, the Discharger shall notify the Regional Water Board by **31 January.** A copy of the notification shall be sent to appropriate local elected officials, local permitting agencies and the press. Within 120 days of the notification, the Discharger shall submit a technical report showing how it will prevent flow volumes from exceeding capacity or how it will increase capacity to handle the larger flows. The Regional Water Board may extend the time for submitting the report.

m. The Discharger shall submit technical reports as directed by the Executive Officer.

n. Chemical, bacteriological, and bioassay analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. In the event a certified laboratory is not available to the Discharger, analyses performed by a noncertified laboratory will be accepted provided a Quality Assurance-Quality Control Program is instituted by the laboratory. A manual containing the steps followed in this program must be kept in the laboratory and shall be available for inspection by Regional Water Board staff. The Quality Assurance-Quality Control Program must conform to USEPA guidelines or to procedures approved by the Regional Water Board.

    i. Unless otherwise specified, all metals shall be reported as Total Metals.

    ii. Acute bioassays shall be performed in accordance with guidelines approved by the Regional Water Board and the Department of Fish and Game or in accordance with methods described in USEPA's manual for measuring acute toxicity of effluents (EPA-821-R-02-012 and subsequent amendments).

    iii. Short-term chronic bioassays shall be performed in accordance with USEPA guidelines (EPA-821-R-02-013 and subsequent amendments).

o. Laboratories that perform sample analyses must be identified in all monitoring reports submitted to the Regional Water Board and USEPA.).

p. The Discharger shall conduct analysis on any sample provided by USEPA as part of the Discharge Monitoring Quality Assurance (DMQA) program. The results of any such analysis shall be submitted to USEPA's DMQA manager.

q. All monitoring and analysis instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary, at least yearly, to ensure their continued accuracy.

r. The Discharger shall file with the Regional Water Board technical reports on self-monitoring performed according to the detailed specifications contained in the Monitoring and Reporting Program attached to this Order.

s. Upon written request of the Regional Water Board, the Discharger shall submit a summary monitoring report to the Regional Water Board. The report shall contain both tabular and graphical summaries of the monitoring data obtained during the previous year(s).

t. All technical reports required herein that involve planning, investigation, evaluation, or design, or other work requiring interpretation and proper application of engineering or geologic sciences, shall be prepared by or under the direction of persons registered to practice in California pursuant to California Business and Professions Code, Sections 6735, 7835, and 7835.1. To demonstrate compliance with Title 16, CCR, Sections 415 and 3065, all technical reports must contain a statement of the qualifications of the responsible registered professional(s). As required by these laws, completed technical reports must bear the signature(s) and seal(s) of the registered professional(s) in a manner such that all work can be clearly attributed to the professional responsible for the work.

u. The Discharger shall take all reasonable steps to minimize any adverse effects to waters of the State or users of those waters resulting from any discharge or sludge use or disposal in violation of this Order. Reasonable steps shall include such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge or sludge use or disposal.

v. Effluent samples shall be taken downstream of the last addition of wastes to the treatment or discharge works where a representative sample may be obtained prior to mixing with the receiving waters. Samples shall be collected at such a point and in such a manner to ensure a representative sample of the discharge.

w. The results of all monitoring required by this Order shall be reported to the Board, and shall be submitted in such a format as to allow direct comparison with the limitations and requirements of this Order. Unless otherwise specified, discharge flows shall be reported in terms of the monthly average and the daily maximum discharge flows

B. Monitoring and Reporting Program Requirements

The discharger shall comply with the Monitoring and Reporting Program, and future revisions thereto, in Attachment E of this Order.

C. Special Provisions

1. Reopener Provisions

a. If more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments

thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

b. This Order may be reopened to include additional prohibitions, effluent limitations or other discharge requirements in the event that the Discharger submits the required information under Section VI.C.2.a of this Order for the discharge of aquaculture chemicals or drugs in addition to salt.

c. If after review of effluent monitoring results or the study results specified in Sections VI.C.2.b and VI.C.2.c it is determined that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective, or the discharge is causing groundwater degradation, this Order may be reopened and effluent limitations added for the subject constituents.

d. If after review of the monitoring study results specified in Section VI.C.2.e it is determined that more stringent effluent limitations for electrical conductivity are needed, this Order may be reopened to include additional effluent limitations.

e. If the ownership of that portion of the Facility property that is currently owned by the Ralph F. Nix 1995 Revocable Trust is transferred to Tsar Nicoulai Caviar, LLC, this Order will be reopened to remove the Ralph F. Nix 1995 Revocable Trust as a Discharger named to this Order.

f. If monitoring or future investigations demonstrate that the discharge of TSS governed by this Order has a reasonable potential to cause or contribute to adverse impacts on water quality and/or beneficial uses of the receiving waters this Order may be reopened to include more stringent effluent limitations for TSS including the establishment of numeric WQBELs if deemed necessary.

2. Special Studies, Technical Reports and Additional Monitoring Requirements

a. This permit authorizes the discharge of salt in accordance with the effluent limitations, BMP plan requirements, Monitoring and Reporting requirements and other conditions of this permit. Other aquaculture chemicals or drugs that may enter the wastewater discharge can only be authorized if the Discharger submits a RWD to the Regional Water Board that contains the following supplemental information, and the Regional Board has issued waste discharge requirements or this Order has been opened and revised:

i. The common name(s) and active ingredient(s) of the drug or chemical proposed for use and discharge.
ii. The purpose for the proposed use of the drug or chemical (i.e. list the specific disease for treatment and specific species for treatment).
iii. The amount proposed for use and the resulting calculated concentration in the discharge.
iv. The duration and frequency of the proposed use.
v. Material Safety Data Sheets and available toxicity information.

vi. Any related Investigational New Animal Drug (INAD), New Animal Drug Application (NADA) information, extra-label use requirements and/or veterinarian prescriptions.

The Discharger shall also submit acute toxicity test information on any new chemical or drug in accordance with methods specified in EPA600/4-90/027, *Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms*, using *Ceriodaphnia dubia* to determine the NOAEL, and LOAEL.

b. There are indications that the discharge may contain constituents that have a reasonable potential to cause or contribute to an exceedance of water quality objectives: (CTR, NTR constituents (priority pollutants), and additional constituents that are specifically listed in Attachment G). The Discharger shall comply with the following time schedule in conducting a study of these constituents potential effect in surface waters:

Task		Compliance Date
i.	Submit Work Plan and Time Schedule to sample the effluent for constituents listed in Attachment G	**90 days** after effective date of this Order
ii.	Begin Study	**30 days** after Executive Officer approval of task b.i
iii.	Complete Study	**18 months** after start of study in task b.ii
iv.	Submit Study Report	**21 months** after start of study in task b.iii

The Discharger shall submit to the Regional Water Board on or before each compliance due date, the specified document or a written report detailing compliance or noncompliance with the specific date and task. If noncompliance is reported, the Discharger shall state the reasons for noncompliance and include an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

The Discharger must utilize USEPA test methods and detection limits to achieve detection levels below applicable water quality criteria. At a minimum the Discharger shall comply with the Monitoring Requirements for these constituents as outlined in Section 2.3 and 2.4 of the Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California, adopted March 2, 2000 by the State Water Resources Control Board. Report all peaks identified by the USEPA test methods.

c. To determine compliance with the Groundwater Limitations, the discharger shall implement a groundwater monitoring program. The groundwater monitoring network shall include one or more background monitoring wells and a sufficient number of

designated monitoring wells to evaluate performance of best practicable control technology (BPTC) measures, and determine if the discharge has degraded groundwater. These include monitoring wells downgradient of every treatment, storage, and disposal unit, including solids disposal, drying or staging areas, which do or may release waste constituents to groundwater.

A groundwater monitoring well installation report shall be prepared by, or under the direction of, and signed by, a registered Geologist, Certified Engineering Geologist, or a Civil Engineer registered by the State of California, and shall contain the information as listed in Attachment I, *Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*

Prior to installing any groundwater monitoring wells, the Discharger shall submit a *Groundwater Monitoring Well Installation Workplan* and a G*roundwater Monitoring Well Installation Report* containing the information as listed in Attachment I, *Items to be Included in a Monitoring Well Installation Workplan and a Monitoring Well Installation Report of Results.*

All monitoring wells shall comply with the appropriate standards as described in *California Well Standards Bulletin 74-90* (June 1991) and *Water Well Standards: State of California Bulletin 94-81* (December 1981), and any more stringent standards adopted by the Discharger or County pursuant to CWC Section 13801.

Following the completion of at least eight monthly groundwater sampling events, the Discharger shall submit a background groundwater quality study report. For each groundwater monitoring parameter/constituent identified in the Monitoring and Reporting Program, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and a comparison of background groundwater quality to that in wells used to monitor the facility. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10).

If the monitoring shows that any constituent concentrations are increased above background water quality, the Discharger shall submit a technical report describing the evaluation's results and critiquing each evaluated component with respect to BPTC and minimizing the discharge's impact on groundwater quality. In no case shall the discharge be allowed to exceed a water quality objective. This Order may be reopened and additional groundwater limitations added.

The Discharger shall comply with the following schedule in implementing the work required by this Provision. Work plans and technical reports submitted pursuant to this Provision shall be subject to the requirements of Provision VI.A.2.t and are subject to Executive Officer approval.

Task		Compliance Date
i.	Submit a *Monitoring Well Installation Work Plan* that meets the requirements specified in Attachment I.	**Within 90 days** of the effective date of this Order.
ii.	Implement monitoring well installation work plan with technical report on sampling procedures and proposed Data Analysis Methods as described in Section VIII.A.3 of Attachment E, MRP.	**Within 60 days** following Executive Officer approval of work plan submitted in accordance with task c.i.
iii.	*Submit a Groundwater Monitoring Well Installation Report.*	**Within 120 days** of the Executive Officer's approval of Task c.i.
iv.	Submit a *Background Groundwater Quality Study Report*.	**Within 300 days** of submittal of the report required in Task c.iii.
v.	Submit a BPTC Implementation Plan.	**Within 90 days** of the Executive Officer's written request.
vi.	Certify full BPTC Implementation.	**Within 270 days** of the Executive Officer's approval of Task c.v.

d. The Discharger shall obtain representative samples of solids in the wastewater treatment pond system and shall submit a *Waste Characterization Report* that shows whether accumulated solids in the ponds pose a threat to water quality. The report shall thoroughly document all site-specific information used in any modeling, all analytical results, background groundwater quality, all assumptions (with justification), all model inputs, and calculations performed. The Discharger shall comply with the following time schedule:

Task		Compliance Date
i.	Submit *Waste Characterization Report*	**Within 120 days** of the effective date of this Order.

e. The Discharger shall develop and implement a *Solids Management Plan* for solids removed from the wastewater and applied to land as a soil amendment. The plan shall describe in detail the frequency, loading rate, and procedures for application of solids to the landscaped area described in the WDRS. Loading rates shall be commensurate with the needs of the landscape materials and supporting calculations shall be provided for the following:

- Nitrogen loading (lbs/acre/year) using actual acreage and solids mass applied on each day of discharge, and including the use of any commercial fertilizers.
- Total dissolved solids (TDS) loading (lbs/acre/year) using actual acreage and solids mass applied on each day of discharge.

The plan shall also describe in detail how the land application area will be managed to prevent: 1) nuisance odors, and 2) the discharge of tail water or storm water containing solids constituents to surface waters.

If additional land application area is required to ensure agronomic loading rates and compliance with Construction, Operation and Maintenance Specification 5.a, the report shall specify the additional area required, the location of the new application area, the type(s) of vegetation to be grown, planned irrigation systems and practices, and calculations demonstrating that all available nitrogen will be removed by the vegetation. The Discharger shall comply with the following time schedule:

Task	Compliance Date
i. Submit *Solids Management Plan*	**Within 60 days** of the effective date of this Order
ii. Certify completion of additional land application area	**Within 120 days** of the Executive Officer's written request

f. The Discharger shall submit a technical report to demonstrate compliance with Provisions VI.C.5.b and VI.C.5.c of this Order:

Task	Compliance Date
i. Submit Mosquito and Vector Control Plan that has been approved by the Sacramento-Yolo Mosquito and Vector Control District	**Within 30 days** of the effective date of this Order
ii. Implement Mosquito and Vector Control Plan	**30 days** following Executive Officer approval of task d.i

The Discharger shall submit to the Regional Water Board on or before each compliance report due date, the specified document or, if appropriate, a written report detailing compliance or noncompliance with the specific schedule date and task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Regional Water Board by letter when it returns to compliance with the time schedule.

g. The Discharger shall conduct the following study to demonstrate compliance with Provision VI.C.3.a.i, requiring the minimization of salt discharged to surface waters. The study shall adequately characterize the concentrations of salt in the effluent and source

water to determine whether effluent limitations for electrical conductivity (EC) are needed.

	Task	Compliance Date
i.	Submit Workplan and Time Schedule to characterize the levels of EC, total dissolved solids (TDS), and chloride in Facility's effluent and source water including that associated with the use and discharge of salt used during the treatment of fish.	**60 days** after effective date of this Order
ii.	Begin Study	**30 days** after Executive Officer approval of task e.i
iii.	Complete Study	**9 months** after start of study approved in task e.ii
iv.	Submit Study Report	**12 months** after start of study approved in task e.ii

3. Best Management Practices and Pollution Prevention

a. **Best Management Practices Plan**

Within 60-days of adoption of this Order, the Discharger shall certify in writing to the Regional Water Board that it has developed a Best Management Practices (BMP) plan. The Discharger shall develop and implement the BMP plan to prevent or minimize the generation and discharge of wastes and pollutants to the waters of the United States and waters of the State. The Discharger shall develop and implement a BMP plan consistent with the following objectives:

i. Minimize the discharge of salt to surface waters.

ii. Solids Management

1) Conduct fish feeding in aquaculture ponds in a manner that limits feed input to the minimum amount reasonably necessary to achieve production goals and sustain targeted rates of aquatic animal growth and minimizes the discharge of unconsumed food and waste products to surface waters.

2) Clean aquaculture ponds using procedures and at frequencies that minimize the disturbance and subsequent discharge of accumulated solids during routine activities such as inventorying, grading, and harvesting.

3) Report the final disposition of all other solids and liquids, including aquaculture drugs and chemicals, not discharged to surface waters in the effluent.

4) Collect, store, and dispose of fish mortalities and other solids in an environmentally safe manner and in a manner so as to prevent the discharge to waters of the United States or waters of the State, unless such discharge is authorized by an NPDES permit or WDRs.

iii. Operations and Maintenance

1) Maintain in-system production and wastewater treatment technologies to prevent the overflow of any floating matter or bypassing of treatment technologies.

2) Inspect the production system and the wastewater treatment system on a routine basis in order to identify and promptly repair any damage.

3) Ensure storage and containment of drugs, chemicals, fuel, waste oil, or other materials to prevent spillage or release into the aquatic animal production Facility, waters of the United States, or waters of the State.

4) Implement procedures for properly containing, cleaning, and disposing of any spilled material.

5) Prevent fish from being released within the FDA-required withdrawal time of any drug or chemical with which they have been treated.

iv. Recordkeeping

1) Maintain records for aquatic animal rearing units documenting the feed amounts and estimates of the numbers and weight of aquatic animals in order to calculate representative feed conversion ratios.

2) Keep records documenting the frequency of cleaning, inspections, maintenance and repairs.

v. Training

1) Adequately train all relevant facility personnel in spill prevention and how to respond in the event of a spill in order to ensure the proper clean-up and disposal of spilled material.

2) Train staff on the proper operation and cleaning of production and wastewater treatment systems, including training in feeding procedures and proper use of equipment.

The Discharger shall ensure that its operations staff are familiar with the BMP Plan and have been adequately trained in the specific procedures it requires.

4. Compliance Schedules – Not Applicable

5. Construction, Operation and Maintenance Specifications

a. Solids disposal specifications:

i. Collected screenings, sludges, and other solids, including fish carcasses, shall be disposed of in a manner approved by the Executive Officer and consistent *with Consolidated Regulations for Treatment, Storage, Processing, or Disposal of Solid Waste*, as set forth in Title 27, CCR, Division 2, Subdivision 1, Section 20005, et seq.

ii. The application of solids to land shall be consistent with reasonable agronomic loading rates that preclude development of vectors or other nuisance conditions and that will not exceed the amount needed to meet crop demand at the time of application or stage of crop growth considering the crop, soil, climate, irrigation management system, type of solid, and local conditions.

iii. The discharge of solid waste to lands not owned or controlled by the Discharger, or in a manner not approved by the Executive Officer, is prohibited.

iv. Crops shall be grown on the application area. Crops shall be selected based on nutrient uptake capacity, tolerance to high soil moisture conditions, and consumptive use of water and irrigation requirements. Cropping activities shall be sufficient to take up all the nitrogen applied. Any annual crop shall be harvested and removed from the application area.

v. Any proposed change in solids disposal from a previously approved practice (as described in this Order) shall be reported to this office at least 90 days in advance of the change.

b. Treatment pond specifications:

i. Objectionable odors originating at this facility shall not be perceivable beyond the limits of the wastewater treatment and disposal areas or property owned by the discharger.

ii. The dissolved oxygen content in the upper zone (1 foot) of wastewater in ponds shall not be less than 1.0 mg/L.

iii. Ponds shall not have a pH less than 6.5 or greater than 8.5.

iv. Ponds shall have sufficient capacity to accommodate allowable wastewater flow and design seasonal precipitation and ancillary inflow and infiltration. Design seasonal precipitation shall be based on total annual precipitation using a return period of 25 years, distributed monthly in accordance with historical rainfall patterns.

v. Freeboard shall never be less than two feet (measured vertically to the lowest point of overflow).

vi. Ponds shall be managed to prevent breeding of mosquitoes. In particular,

1) An erosion control program should assure that small coves and irregularities are not created around the perimeter of water surfaces.

2) Weeds shall be minimized, through control of water depth, harvesting, or herbicides.

3) Dead algae, dead vegetation, and debris shall not accumulate on water surfaces.

c. Areas utilized to collect and transport wastewater, or to treat wastewater shall be managed to prevent breeding of mosquitoes. More specifically,

i. Ditches shall be free of emergent, marginal and floating vegetation.

ii. Standing water shall not be allowed for greater than 48-hours.

iii. Low pressure and un-pressurized pipelines and ditches accessible to mosquitoes shall not be used to store wastewater.

iv. Fish tank leakage shall not create standing water.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

a. Prior to making any change in the discharge point, place of use, or purpose of use of the wastewater, the Discharger shall obtain approval of, or clearance from the State Water Resources Control Board (Division of Water Rights).

b. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be immediately forwarded to this office.

To assume operation under this Order, the succeeding owner or operator must apply in writing to the Executive Officer requesting transfer of the Order. The request must contain the requesting entity's full legal name, the State of incorporation if a corporation, address and telephone number of the persons responsible for contact with the Regional Water Board and a statement. The statement shall comply with the signatory paragraph of Standard Provision V.B, Attachment D, and state that the new owner or operator assumes full responsibility for compliance with this Order. Failure to submit the request shall be considered a discharge without requirements, a violation of the California Water Code. Transfer shall be approved or disapproved in writing by the Executive Officer.

VII. COMPLIANCE DETERMINATION

Compliance with the effluent limitations contained in Section IV of this Order will be determined as specified below:

A. Average Monthly Effluent Limitation (AMEL).
If the average of daily discharges over a calendar month exceeds the AMEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for each day of that month for that parameter (e.g., resulting in 31 days of non-compliance in a 31-day month). The average of daily discharges over the calendar month that exceeds the AMEL for a parameter will be considered out of compliance for that month only. If only a single sample is taken during the calendar month and the analytical result for that sample exceeds the AMEL, the discharger will be considered out of compliance for that calendar month. For any one calendar month during which no sample (daily discharge) is taken, no compliance determination can be made for that calendar month.

B. Maximum Daily Effluent Limitation (MDEL).
If a daily discharge exceeds the MDEL for a given parameter, an alleged violation will be flagged and the discharger will be considered out of compliance for that parameter for that 1 day only within the reporting period. For any 1 day during which no sample is taken, no compliance determination can be made for that day.

C. Instantaneous Minimum Effluent Limitation.
If the analytical result of a single grab sample is lower than the instantaneous minimum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both are lower than the instantaneous minimum effluent limitation would result in two instances of non-compliance with the instantaneous minimum effluent limitation).

D. Instantaneous Maximum Effluent Limitation.
If the analytical result of a single grab sample is higher than the instantaneous maximum effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter for that single sample. Non-compliance for each sample will be considered separately (e.g., the results of two grab samples taken within a calendar day that both exceed the instantaneous maximum effluent limitation would result in two instances of non-compliance with the instantaneous maximum effluent limitation).

E. Maximum 1-Hour Average.
If the analytical result of a samples collected within 1-hour are higher than the maximum 1-hour average effluent limitation for a parameter, a violation will be flagged and the discharger will be considered out of compliance for that parameter.

ATTACHMENT A – DEFINITIONS

Average Monthly Effluent Limitation (AMEL): the highest allowable average of daily discharges over a calendar month, calculated as the sum of all daily discharges measured during a calendar month divided by the number of daily discharges measured during that month.

Average Weekly Effluent Limitation (AWEL): the highest allowable average of daily discharges over a calendar week (Sunday through Saturday), calculated as the sum of all daily discharges measured during a calendar week divided by the number of daily discharges measured during that week.

Daily Discharge: Daily Discharge is defined as either: (1) the total mass of the constituent discharged over the calendar day (12:00 am through 11:59 pm) or any 24-hour period that reasonably represents a calendar day for purposes of sampling (as specified in the permit), for a constituent with limitations expressed in units of mass or; (2) the unweighted arithmetic mean measurement of the constituent over the day for a constituent with limitations expressed in other units of measurement (e.g., concentration).

The daily discharge may be determined by the analytical results of a composite sample taken over the course of one day (a calendar day or other 24-hour period defined as a day) or by the arithmetic mean of analytical results from one or more grab samples taken over the course of the day.

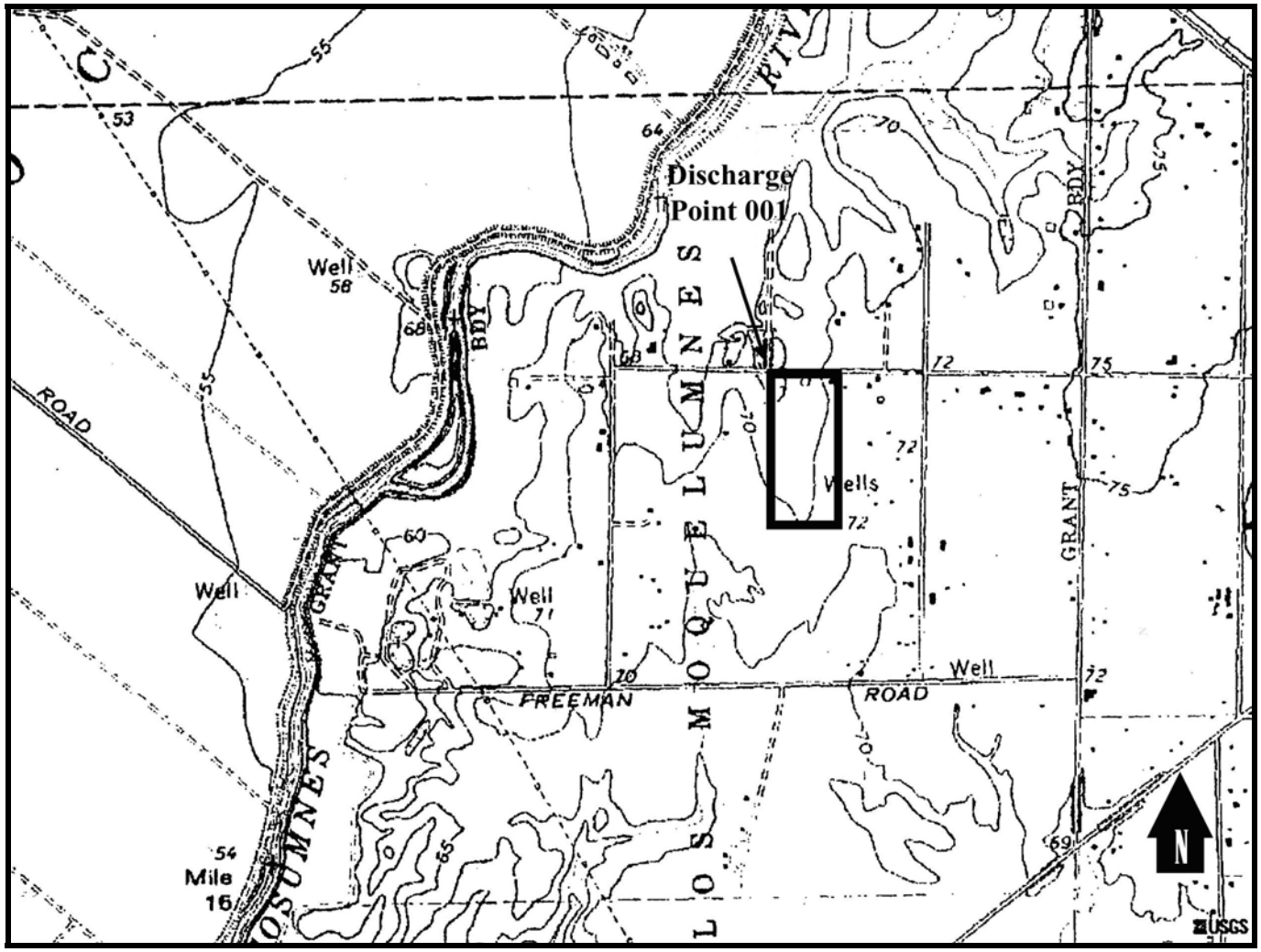
For composite sampling, if 1 day is defined as a 24-hour period other than a calendar day, the analytical result for the 24-hour period will be considered as the result for the calendar day in which the 24-hour period ends.

Instantaneous Maximum Effluent Limitation: the highest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous maximum limitation).

Instantaneous Minimum Effluent Limitation: the lowest allowable value for any single grab sample or aliquot (i.e., each grab sample or aliquot is independently compared to the instantaneous minimum limitation).

Maximum Daily Effluent Limitation (MDEL): the highest allowable daily discharge of a pollutant.

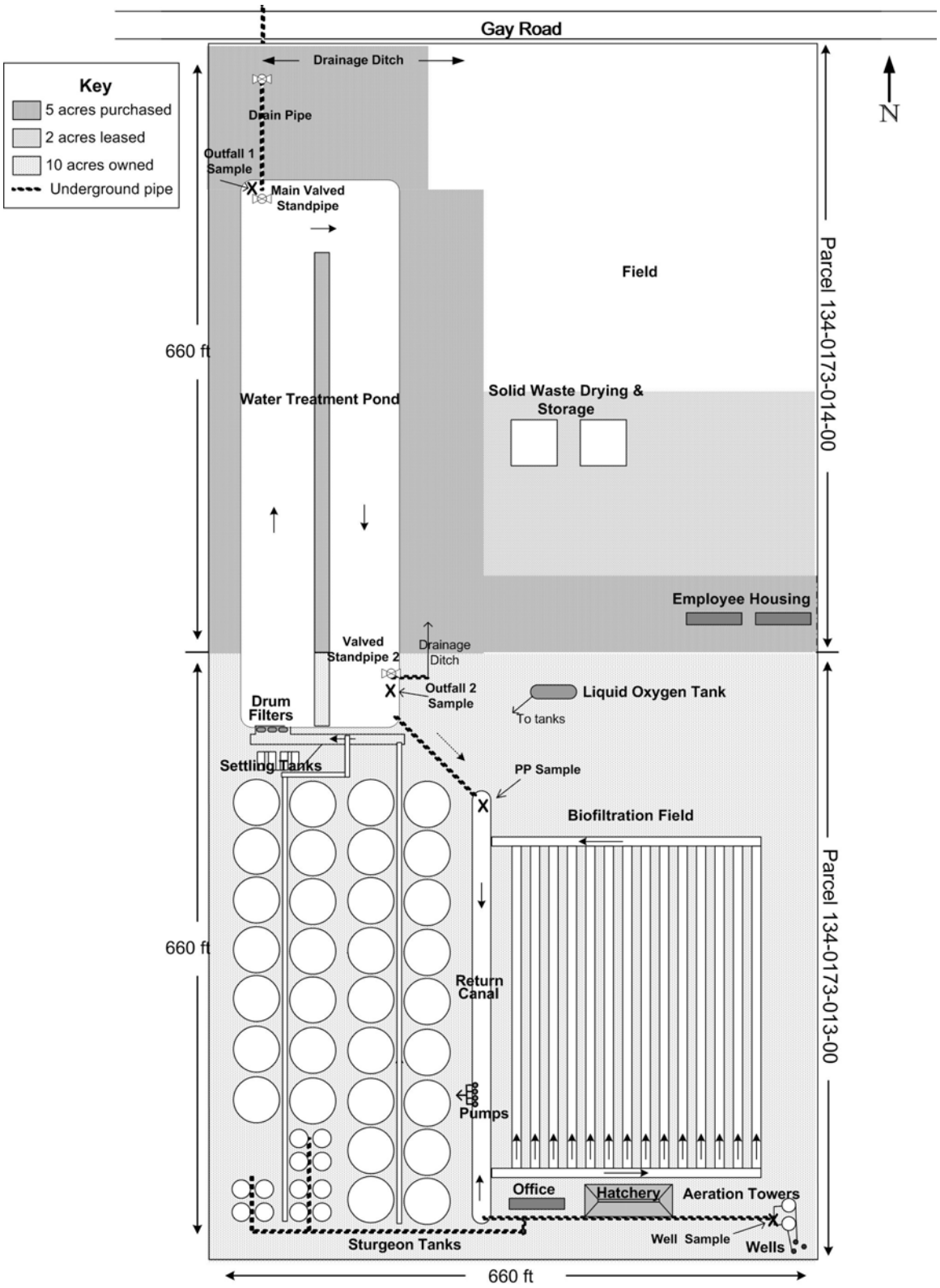
ATTACHMENT B – TOPOGRAPHIC MAP



SITE MAP

TSAR NICOULAI CAVIAR, LLC, THE RALPH F. NIX 1995 REVOCABLE TRUST
TSAR NICOULAI STURGEON FARM, WILTON
Sacramento County
Discharge Location - Latitude 38° 24’ 03” N, Longitude 121° 16’ 53” W

ATTACHMENT C – WASTEWATER FLOW SCHEMATIC



ATTACHMENT D – FEDERAL STANDARD PROVISIONS

I. STANDARD PROVISIONS – PERMIT COMPLIANCE

A. Duty to Comply

1. The Discharger must comply with all of the conditions of this Order. Any noncompliance constitutes a violation of the Clean Water Act (CWA) and the California Water Code (CWC) and is grounds for enforcement action, for permit termination, revocation and reissuance, or denial of a permit renewal application [*40 CFR §122.41(a)*].

2. The Discharger shall comply with effluent standards or prohibitions established under Section 307(a) of the Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under Section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions, even if this Order has not been modified to incorporate the requirement [*40 CFR §122.41(a)(1)*].

B. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a Discharger in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Order [*40 CFR §122.41(c)*].

C. Duty to Mitigate

The Discharger shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this Order that has a reasonable likelihood of adversely affecting human health or the environment [*40 CFR §122.41(d)*].

D. Proper Operation and Maintenance

The Discharger shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with the conditions of this Order. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems that are installed by a Discharger only when necessary to achieve compliance with the conditions of this Order [*40 CFR §122.41(e)*].

E. Property Rights

1. This Order does not convey any property rights of any sort or any exclusive privileges [*40 CFR §122.41(g)*].

2. The issuance of this Order does not authorize any injury to persons or property or invasion of other private rights, or any infringement of State or local law or regulations [*40 CFR §122.5(c)*].

F. Inspection and Entry

The Discharger shall allow the Regional Water Quality Control Board (RWQCB), State Water Resources Control Board (SWRCB), United States Environmental Protection Agency (USEPA), and/or their authorized representatives (including an authorized contractor acting as their representative), upon the presentation of credentials and other documents, as may be required by law, to [*40 CFR §122.41(i)*] [*CWC 13383(c)*]:

1. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records are kept under the conditions of this Order [*40 CFR §122.41(i)(1)*];

2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order [*40 CFR §122.41(i)(2)*];

3. Inspect and photograph, at reasonable times, any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order [*40 CFR §122.41(i)(3)*];

4. Sample or monitor, at reasonable times, for the purposes of assuring Order compliance or as otherwise authorized by the CWA or the CWC, any substances or parameters at any location [*40 CFR §122.41(i)(4)*].

G. Bypass

1. Definitions

   a. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility [*40 CFR §122.41(m)(1)(i)*].

   b. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities, which causes them to become inoperable, or substantial and permanent loss of natural resources that can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production [*40 CFR §122.41(m)(1)(ii)*].

2. Bypass not exceeding limitations – The Discharger may allow any bypass to occur which does not cause exceedances of effluent limitations, but only if it is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions listed in Standard Provisions – Permit Compliance I.G.3 and I.G.5 below [*40 CFR §122.41(m)(2)*].

3. Prohibition of bypass – Bypass is prohibited, and the Regional Water Board may take enforcement action against a Discharger for bypass, unless [*40 CFR §122.41(m)(4)(i)*]:

a. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage [*40 CFR §122.41(m)(4)(A)*];

b. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass that occurred during normal periods of equipment downtime or preventive maintenance [*40 CFR §122.41(m)(4)(B)*]; and

c. The Discharger submitted notice to the Regional Water Board as required under Standard Provision – Permit Compliance I.G.5 below [*40 CFR §122.41(m)(4)(C)*].

4. The Regional Water Board may approve an anticipated bypass, after considering its adverse effects, if the Regional Water Board determines that it will meet the three conditions listed in Standard Provisions – Permit Compliance I.G.3 above [*40 CFR §122.41(m)(4)(ii)*].

5. Notice

a. Anticipated bypass. If the Discharger knows in advance of the need for a bypass, it shall submit a notice, if possible at least 10 days before the date of the bypass [*40 CFR §122.41(m)(3)(i)*].

b. Unanticipated bypass. The Discharger shall submit notice of an unanticipated bypass as required in Standard Provisions - Reporting V.E below [*40 CFR §122.41(m)(3)(ii)*].

H. Upset

Upset means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation [*40 CFR §122.41(n)(1)*].

1. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph H.2 of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review [*40 CFR §122.41(n)(2)*].

2. Conditions necessary for a demonstration of upset. A Discharger who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs or other relevant evidence that [*40 CFR §122.41(n)(3)*]:

a. An upset occurred and that the Discharger can identify the cause(s) of the upset [*40 CFR §122.41(n)(3)(i)*];

b. The permitted facility was, at the time, being properly operated [*40 CFR §122.41(n)(3)(i)*];

c. The Discharger submitted notice of the upset as required in Standard Provisions – Reporting V.E.2.b [*40 CFR §122.41(n)(3)(iii)*]; and

d. The Discharger complied with any remedial measures required under Standard Provisions – Permit Compliance I.C above [*40 CFR §122.41(n)(3)(iv)*].

3. Burden of proof. In any enforcement proceeding, the Discharger seeking to establish the occurrence of an upset has the burden of proof [*40 CFR §122.41(n)(4)*].

II. STANDARD PROVISIONS – PERMIT ACTION

A. General

This Order may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Discharger for modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any Order condition [*40 CFR §122.41(f)*].

B. Duty to Reapply

If the Discharger wishes to continue an activity regulated by this Order after the expiration date of this Order, the Discharger must apply for and obtain a new permit [*40 CFR §122.41(b)*].

C. Transfers

This Order is not transferable to any person except after notice to the Regional Water Board. The Regional Water Board may require modification or revocation and reissuance of the Order to change the name of the Discharger and incorporate such other requirements as may be necessary under the CWA and the CWC [*40 CFR §122.41(l)(3)*] [*40 CFR §122.61*].

III. STANDARD PROVISIONS – MONITORING

A. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity [*40 CFR §122.41(j)(1)*].

B. Monitoring results must be conducted according to test procedures under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503 unless other test procedures have been specified in this Order [*40 CFR §122.41(j)(4)*] [*40 CFR §122.44(i)(1)(iv)*].

IV. STANDARD PROVISIONS – RECORDS

A. Except for records of monitoring information required by this Order related to the Discharger's sewage sludge use and disposal activities, which shall be retained for a period of at least five years (or longer as required by 40 CFR Part 503), the Discharger shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this Order, and records of all data used to complete the application for this Order, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Regional Water Board Executive Officer at any time [*40 CFR §122.41(j)(2)*].

B. Records of monitoring information shall include:

1. The date, exact place, and time of sampling or measurements [*40 CFR §122.41(j)(3)(i)*];
2. The individual(s) who performed the sampling or measurements [*40 CFR §122.41(j)(3)(ii)*];
3. The date(s) analyses were performed [*40 CFR §122.41(j)(3)(iii)*];
4. The individual(s) who performed the analyses [*40 CFR §122.41(j)(3)(iv)*];
5. The analytical techniques or methods used [*40 CFR §122.41(j)(3)(v)*]; and
6. The results of such analyses [*40 CFR §122.41(j)(3)(vi)*].

C. Claims of confidentiality for the following information will be denied [*40 CFR §122.7(b)*]:

1. The name and address of any permit applicant or Discharger [*40 CFR §122.7(b)(1)*]; and
2. Permit applications and attachments, permits and effluent data [*40 CFR §122.7(b)(2)*].

V. STANDARD PROVISIONS – REPORTING

A. Duty to Provide Information

The Discharger shall furnish to the Regional Water Board, SWRCB, or USEPA within a reasonable time, any information which the Regional Water Board, SWRCB, or USEPA may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Order or to determine compliance with this Order. Upon request, the Discharger shall also furnish to the Regional Water Board, SWRCB, or USEPA copies of records required to be kept by this Order [*40 CFR §122.41(h)*] [*CWC 13267*].

B. Signatory and Certification Requirements

1. All applications, reports, or information submitted to the Regional Water Board, SWRCB, and/or USEPA shall be signed and certified in accordance with paragraph (2.) and (3.) of this provision [*40 CFR §122.41(k)*].

2. All permit applications shall be signed as follows:

   a. For a corporation: By a responsible corporate officer. For the purpose of this section, a responsible corporate officer means: (i) A president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy- or decision-making functions for the corporation, or (ii) the manager of one or more manufacturing, production, or operating facilities, provided, the manager is authorized to make management decisions which govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiating and directing other comprehensive measures to assure long term environmental compliance with environmental laws and regulations; the manager can ensure that the necessary systems are established or actions taken to gather complete and accurate information for permit application requirements; and where authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures [*40 CFR §122.22(a)(1)*];

   b. For a partnership or sole proprietorship: by a general partner or the proprietor, respectively [*40 CFR §122.22(a)(2)*]; or

   c. For a municipality, State, federal, or other public agency: by either a principal executive officer or ranking elected official. For purposes of this provision, a principal executive officer of a federal agency includes: (i) the chief executive officer of the agency, or (ii) a senior executive officer having responsibility for the overall operations of a principal geographic unit of the agency (e.g., Regional Administrators of USEPA) [*40 CFR §122.22(a)(3)*].

3. All reports required by this Order and other information requested by the Regional Water Board, SWRCB, or USEPA shall be signed by a person described in paragraph (b) of this provision, or by a duly authorized representative of that person. A person is a duly authorized representative only if:

   a. The authorization is made in writing by a person described in paragraph (2.) of this provision [*40 CFR §122.22(b)(1)*];

   b. The authorization specified either an individual or a position having responsibility for the overall operation of the regulated facility or activity such as the position of plant manager, operator of a well or a well field, superintendent, position of equivalent responsibility, or an individual or position having overall responsibility for environmental matters for the company (a duly authorized representative may thus be

either a named individual or any individual occupying a named position) [*40 CFR §122.22(b)(2)*]; and

c. The written authorization is submitted to the Regional Water Board, SWRCB, or USEPA [*40 CFR §122.22(b)(3)*].

4. If an authorization under paragraph (3.) of this provision is no longer accurate because a different individual or position has responsibility for the overall operation of the facility, a new authorization satisfying the requirements of paragraph (3.) of this provision must be submitted to the Regional Water Board, SWRCB or USEPA prior to or together with any reports, information, or applications, to be signed by an authorized representative [40 CFR §122.22(c)].

5. Any person signing a document under paragraph (2.) or (3.) of this provision shall make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations" [*40 CFR §122.22(d)*].

C. Monitoring Reports

1. Monitoring results shall be reported at the intervals specified in the Monitoring and Reporting Program in this Order [*40 CFR §122.41(l)(4)*].

2. Monitoring results must be reported on a Discharge Monitoring Report (DMR) form or forms provided or specified by the Regional Water Board or SWRCB for reporting results of monitoring of sludge use or disposal practices [*40 CFR §122.41(l)(4)(i)*].

3. If the Discharger monitors any pollutant more frequently than required by this Order using test procedures approved under 40 CFR Part 136 or, in the case of sludge use or disposal, approved under 40 CFR Part 136 unless otherwise specified in 40 CFR Part 503, or as specified in this Order, the results of this monitoring shall be included in the calculation and reporting of the data submitted in the DMR or sludge reporting form specified by the Regional Water Board [*40 CFR §122.41(l)(4)(ii)*].

4. Calculations for all limitations, which require averaging of measurements, shall utilize an arithmetic mean unless otherwise specified in this Order [*40 CFR §122.41(l)(4)(iii)*].

D. Compliance Schedules

Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Order, shall be submitted no later than 14 days following each schedule date [*40 CFR §122.41(l)(5)*].

E. Twenty-Four Hour Reporting

1. The Discharger shall report any noncompliance that may endanger health or the environment. Any information shall be provided orally within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission shall also be provided within five (5) days of the time the Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance [*40 CFR §122.41(l)(6)(i)*].

2. The following shall be included as information that must be reported within 24 hours under this paragraph [*40 CFR §122.41(l)(6)(ii)*]:

   a. Any unanticipated bypass that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(A)*].

   b. Any upset that exceeds any effluent limitation in this Order [*40 CFR §122.41(l)(6)(ii)(B)*].

   c. Violation of a maximum daily discharge limitation for any of the pollutants listed in this Order to be reported within 24 hours [*40 CFR §122.41(l)(6)(ii)(C)*].

3. The Regional Water Board may waive the above-required written report under this provision on a case-by-case basis if an oral report has been received within 24 hours [*40 CFR §122.41(l)(6)(iii)*].

F. Planned Changes

The Discharger shall give notice to the Regional Water Board as soon as possible of any planned physical alterations or additions to the permitted facility. Notice is required under this provision only when [*40 CFR §122.41(l)(1)*]:

1. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR §122.29(b) [*40 CFR §122.41(l)(1)(i)*]; or

2. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in this Order nor to notification requirements under 40 CFR Part

122.42(a)(1) (see Additional Provisions—Notification Levels VII.A.1) [*40 CFR §122.41(l)(1)(ii)*].

3. The alteration or addition results in a significant change in the Discharger's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan [*40 CFR §122.41(l)(1)(iii)*].

G. Anticipated Noncompliance

The Discharger shall give advance notice to the Regional Water Board or SWRCB of any planned changes in the permitted facility or activity that may result in noncompliance with General Order requirements [*40 CFR §122.41(l)(2)]*.

H. Other Noncompliance

The Discharger shall report all instances of noncompliance not reported under Standard Provisions – Reporting E.3, E.4, and E.5 at the time monitoring reports are submitted. The reports shall contain the information listed in Standard Provision – Reporting V.E [*40 CFR §122.41(l)(7)*].

I. Other Information

When the Discharger becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Regional Water Board, SWRCB, or USEPA, the Discharger shall promptly submit such facts or information [*40 CFR §122.41(l)(8)*].

VI. STANDARD PROVISIONS – ENFORCEMENT

A. The CWA provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed $25,000 per day for each violation. The CWA provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing

violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the Clean Water Act, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions [*40 CFR §122.41(a)(2)*] [*CWC 13385 and 13387*].

B. Any person may be assessed an administrative penalty by the Regional Water Board for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000 [*40 CFR §122.41(a)(3)*].

C. The CWA provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than $10,000, or by imprisonment for not more than 2 years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than $20,000 per day of violation, or by imprisonment of not more than 4 years, or both [*40 CFR §122.41(j)(5)*].

D. The CWA provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this Order, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six months per violation, or by both [*40 CFR §122.41(k)(2)*].

VII. ADDITIONAL PROVISIONS – NOTIFICATION LEVELS

A. Non-Municipal Facilities

Existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Regional Water Board as soon as they know or have reason to believe [*40 CFR §122.42(a)*]:

1. That any activity has occurred or will occur that would result in the discharge, on a routine or frequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(1)*]:

a. 100 micrograms per liter (µg/L) [*40 CFR §122.42(a)(1)(i)*];

b. 200 µg/L for acrolein and acrylonitrile; 500 µg/L for 2,4-dinitrophenol and 2-methyl-4,6-dinitrophenol; and 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(1)(ii)*];

c. Five (5) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(1)(iii)*]; or

d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(1)(iv)*].

2. That any activity has occurred or will occur that would result in the discharge, on a non-routine or infrequent basis, of any toxic pollutant that is not limited in this Order, if that discharge will exceed the highest of the following "notification levels" [*40 CFR §122.42(a)(2)*]:

a. 500 micrograms per liter (µg/L) [*40 CFR §122.42(a)(2)(i)*];

b. 1 milligram per liter (mg/L) for antimony [*40 CFR §122.42(a)(2)(ii)*];

c. Ten (10) times the maximum concentration value reported for that pollutant in the Report of Waste Discharge [*40 CFR §122.42(a)(2)(iii)*]; or

d. The level established by the Regional Water Board in accordance with 40 CFR §122.44(f) [*40 CFR §122.42(a)(2)(iv)*].

B. Publicly-Owned Treatment Works (POTWs)

All POTWs shall provide adequate notice to the Regional Water Board of the following [*40 CFR §122.42(b)*]:

1. Any new introduction of pollutants into the POTW from an indirect discharger that would be subject to Sections 301 or 306 of the CWA if it were directly discharging those pollutants [*40 CFR §122.42(b)(1)*]; and

2. Any substantial change in the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of adoption of the Order [*40 CFR §122.42(b)(2)*].

Adequate notice shall include information on the quality and quantity of effluent introduced into the POTW as well as any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW [*40 CFR §122.42(b)(3)*].

Attachment E – Monitoring and Reporting Program – Table of Contents

ATTACHMENT E – MONITORING AND REPORTING PROGRAM (MRP)

The Code of Federal Regulations (CFR) at 40 CFR Section122.48 requires that all NPDES permits specify monitoring and reporting requirements. CWC sections 13267 and 13383 also authorize the Regional Water Quality Control Board (RWQCB) to require technical and monitoring reports. This MRP establishes monitoring and reporting requirements that implement the federal and California regulations.

I. GENERAL MONITORING PROVISIONS

A. Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge. All samples shall be taken at the monitoring locations specified below and, unless otherwise specified, before the monitored flow joins or is diluted by any other waste stream, body of water, or substance. Monitoring locations shall not be changed without notification to and the approval of this Regional Water Board.

B. Appropriate flow measurement devices and methods consistent with accepted scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices shall be installed, calibrated and maintained to ensure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than ±10 percent from true discharge rates throughout the range of expected discharge volumes. Guidance in selection, installation, calibration and operation of acceptable flow measurement devices can be obtained from the following references:

1. *A Guide to Methods and Standards for the Measurement of Water Flow*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 421, May 1975, 96 pp. (Available from the U.S. Government Printing Office, Washington, D.C. 20402. Order by SD Catalog No. C13.10:421.)

2. *Water Measurement Manual*, U.S. Department of Interior, Bureau of Reclamation, Second Edition, Revised Reprint, 1974, 327 pp. (Available from the U.S. Government Printing Office, Washington D.C. 20402. Order by Catalog No. 172.19/2:W29/2, Stock No. S/N 24003-0027.)

3. *Flow Measurement in Open Channels and Closed Conduits*, U.S. Department of Commerce, National Bureau of Standards, NBS Special Publication 484, October 1977, 982 pp. (Available in paper copy or microfiche from National Technical Information Services (NTIS) Springfield, VA 22151. Order by NTIS No. PB-273 535/5ST.)

4. *NPDES Compliance Sampling Manual*, U.S. Environmental Protection Agency, Office of Water Enforcement, Publication MCD-51, 1977, 140 pp. (Available from the General Services Administration (8FFS), Centralized Mailing Lists Services, Building 41, Denver Federal Center, CO 80225.)

C. Unless otherwise approved by the Regional Water Board's Executive Officer, all analyses shall be conducted at a laboratory certified for such analyses by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of "Guidelines Establishing Test Procedures for Analysis of Pollutants", promulgated by the United States Environmental Protection Agency.

D. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once per year to ensure continued accuracy of the devices.

E. Monitoring results, including noncompliance, shall be reported at intervals and in a manner specified in this Monitoring and Reporting Program.

F. The collection, preservation and holding times of all samples shall be in accordance with United States Environmental Protection Agency (USEPA) approved procedures. Unless otherwise approved by the Regional Water Board's Executive Officer, all analyses shall be conducted by a laboratory certified by the State Department of Health Services. All analyses shall be conducted in accordance with the latest edition of the "Guidelines Establishing Test Procedures for Analysis of Pollutants" (40 CFR Part 136), promulgated by the USEPA.

G. If the facility is not in operation, or there is no discharge during a required reporting period, the Discharger shall forward a letter to the Regional Water Board indicating that there has been no activity during the required reporting period.

II. MONITORING LOCATIONS

The Discharger shall establish the following monitoring locations to demonstrate compliance with the effluent limitations, discharge specifications, and other requirements in this Order:

Discharge Point Name	Monitoring Location Name	Monitoring Location Description (include Latitude and Longitude when available)
001	M-001	Representative sample of total effluent wastewater flow after all treatment operations, at the last connection prior to discharge from Discharge Point 001.

III. INFLUENT MONITORING REQUIREMENTS – NOT APPLICABLE

IV. EFFLUENT MONITORING REQUIREMENTS

A. Monitoring Location M-001

1. The Discharger shall monitor wastewater discharged at M-001 as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Flow	mgd	Measure	Continuous	-
Total Ammonia as N	mg/L	Grab	1 / week	[1]
	lbs/day	Calculated		
pH[3]	Standard Units	Grab	1 / week	[1]
Temperature[3]	ºF	Grab	1 / week	[1]
Dissolved Oxygen[3]	mg/L	Grab	1 / week	[1]
Total Suspended Solids	mg/L	24-hour composite[2]	1 / week	[1]
	lbs/day	Calculated		
Settleable Solids	ml/L	24-hour composite[2]	1 / week	[1]
Total Iron	µg/L	Grab	1 / month	[1]
	lbs/day	Calculated		
Total Manganese	µg/L	Grab	1 / month	[1]
	lbs/day	Calculated		
Nitrate Nitrogen	mg/L	Grab	1 / month	[1]
	lbs/day	Calculated		
Electrical Conductivity	µmhos/ cm	Grab	1 / month	[1]
Total Dissolved Solids	mg/L	Grab	1 / month	[1]
Chloride	mg/L	Grab	1 / month	[1]
Oil and Grease	mg/L	Grab	1 / month	[1]
Total Arsenic	µg/L	Grab	1 / quarter	[1]
Total Aluminum	µg/L	Grab	1 / quarter	[1]
Total Fluoride	µg/L	Grab	1 / quarter	[1]
Nitrite Nitrogen	µg/L	Grab	1 / quarter	[1]
Methylene Blue active Substances	µg/L	Grab	1 / quarter	[1]
$CBOD_5$	mg/L	24-hour composite[2]	1 / quarter	[1]
Total Phosphorous	µg/L	Grab	1 / quarter	[1]

1. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Board.
2. Samples collected from the outlet structure of ponds will be considered adequately composited.
3. A hand-held field meter may be used, provided the meter utilizes a USEPA-approved algorithm/method and is calibrated and maintained in accordance with the manufacturer's instructions.

2. If the discharge is intermittent rather than continuous, then on the first day of each such discharge, the Discharger shall monitor and record data for all of the constituents listed above, after which the frequency of analysis given in the schedule shall apply for the duration of each such intermittent discharge. In no event shall the Discharger be required to monitor and record data more often than twice the frequencies listed in the schedule.

V. WHOLE EFFLUENT TOXICITY TESTING REQUIREMENTS – NOT APPLICABLE

VI. LAND DISCHARGE MONITORING REQUIREMENTS – NOT APPLICABLE

VII. RECLAMATION MONITORING REQUIREMENTS – NOT APPLICABLE

VIII. RECEIVING WATER MONITORING REQUIREMENTS

A. Surface Water Monitoring – Not Applicable

B. Groundwater Monitoring

1. Prior to construction of any additional groundwater monitoring wells, the Discharger shall submit plans and specifications to the Regional Water Board for review and approval. Once installed, all new wells shall be added to the MRP, and shall be sampled and analyzed according to the schedule below.

2. Prior to collecting samples and after measuring the water level, each monitoring well shall be adequately purged to remove water that has been standing within the well screen and casing that may not be chemically representative of formation water. Depending on the hydraulic conductivity of the geologic setting, the volume removed during purging typically does not exceed 3 to 5 volumes of the standing water within the well casing and screen, or additionally the filter pack pore volume. At least quarterly and concurrently with groundwater quality sampling, the Discharger shall measure the water level in each well as groundwater depth (in feet and hundredths) and as groundwater surface elevation (in feet and hundredths above mean sea level). Samples shall be collected from approved monitoring wells and analyzed for the following constituents:

Constituent/Parameter	Units	Type of Sample	Frequency
Depth to groundwater	To 0.01 foot (hundredths)	Measured	1/quarter[1,2]
Groundwater elevation	Above mean sea level, to 0.01 foot	Calculated	1/quarter[1,2]
pH	pH Units	Grab	1/quarter[1,2]
Fecal Coliform	MPN/100ml	Grab	1/quarter[1,2]
Total Iron	µg/L	Grab	1/quarter[1,2]
Total Manganese	µg/L	Grab	1/quarter[1,2]
Total Nitrogen	mg/L	Grab	1/quarter[1,2]
Nitrate Nitrogen	mg/L	Grab	1/quarter[1,2]
Total Ammonia as N	mg/L	Grab	1/quarter[1,2]
Electrical Conductivity	µmhos/cm	Grab	1/quarter[1,2]

[1] January, April, July and October
[2] Designated background monitoring wells shall be sampled at least 2/quarter for at least one year upon initiation of Provision VI.C.2.c. Following one year of monitoring at 2/quarter frequency, the frequency of background monitoring well sampling may be reduced to 1/quarter.

3. Additionally, the Discharger shall include a technical description of proposed Data Analysis Methods for evaluating groundwater monitoring data (e.g., equivalent or similar to that described in Title 27 Section 20415(e)(7-10)), consisting, at a minimum, methods to: (a) characterize natural background water quality of monitored constituents; (b) determine statistically significant differences between background and compliance wells for constituents that do not have water quality objectives or have background concentrations that exceed water quality objectives; and (c) select the minimum sample size required for the proposed data analysis approach and, if greater than that required by this program (i.e., 2/quarter), identification of when and how the additional samples will be collected during the one-year groundwater characterization period.

4. After completing the groundwater monitoring and reporting required in Special Provision VI.C.2.c of this Order, the Discharger shall continue to analyze monitoring data from background well(s) quarterly to (a) compute values characterizing water quality for each monitored chemical constituent/parameter and (b) perform an initial assessment of whether there is evidence of an impact from the discharge. The Discharger shall characterize groundwater quality using the proposed Data Analysis Method on the following:

Groundwater Constituents to Evaluate Using Data Analysis Method

Total Iron	Total Manganese
Total Ammonia as N	Nitrate Nitrogen
Electrical Conductivity	Fecal Coliform

C. Groundwater Reporting Requirements

The groundwater monitoring frequency shall be monthly until eight sampling events have been completed and quarterly thereafter. Groundwater monitoring reports shall be submitted quarterly under separate cover to the Regional Water Board. The Quarterly Report shall include the following:

1. Tabular summary of groundwater monitoring results.
2. A scaled map showing relevant structures and features of the facility, the locations of monitoring wells and any other sampling stations, and groundwater elevation contours referenced to mean sea level datum.
3. An assessment of groundwater flow direction and gradient on the date of measurement, comparison of previous flow direction and gradient data, and discussion of seasonal trends, if any.
4. A narrative discussion of the analytical results for all groundwater locations monitored including spatial and temporal trends, with reference to summary data tables, graphs, and appended analytical reports (as applicable).
5. A comparison of the monitoring data during the reporting period to numerical groundwater limitations in the WDRs and an explanation of any exceedances of limitations.

6. A narrative description of all preparatory, monitoring, sampling, and analytical testing activities for the groundwater monitoring (reference to previous submitted report(s) describing standard sampling procedures is acceptable).
7. Field logs for each well documenting depth to groundwater; parameters measured before, during, and after purging; method of purging; calculation of casing volume; and total volume of water purged.
8. Summary data tables of historical and current water table elevations and analytical results.
9. Copies of laboratory analytical report(s) for groundwater monitoring.

IX. OTHER MONITORING REQUIREMENTS

A. Priority Pollutant Metals Monitoring

The State Water Resources Control Board (SWRCB) adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (known as the State Implementation Policy or SIP). The SIP states that the Regional Water Boards will require periodic monitoring (at least once prior to issuance and reissuance of a permit) for pollutants for which criteria or objectives apply and for which no effluent limitations have been established.

The Regional Water Board has determined that, based on priority pollutant data collected from this and similar facilities, discharge of priority pollutants other than metals are unlikely. Accordingly, the Regional Water Board is requiring, as part of this Monitoring and Reporting Program, that the Discharger monitor effluent and analyze the sample for priority pollutant metals **one time at least 180 days but no more than 365 days prior to expiration of this Order.**

The Discharger must analyze pH and hardness of the effluent at the same time as priority pollutant metals. The priority pollutant metals for which this one-time analysis is required are as follows:

- Antimony
- Arsenic
- Beryllium
- Cadmium
- Chromium (III)
- Chromium (IV)
- Copper
- Lead
- Mercury
- Nickel
- Selenium
- Silver
- Thallium
- Zinc

Metals shall be analyzed by the USEPA methods listed below. Alternative analytical procedures may be used with approval by the Regional Water Board if the alternative method has the same or better detection level than the method listed.

Method Description	EPA Method	Parameter
Inductively Coupled Plasma/Mass Spectrometry (ICP/MS)	1638	Antimony, Beryllium, Cadmium, Copper, Lead, Nickel, Selenium, Silver, Thallium, Total Chromium, Zinc
Cold Vapor Atomic Absorption (CVAA)	1631	Mercury
Gaseous Hydride Atomic Absorption (HYDRIDE)	206.3	Arsenic
Flame Atomic Absorption (FAA)	218.4	Chromium VI

All priority pollutant metal analyses shall be performed at a laboratory certified by the California Department of Health Services. The laboratory is required to submit the Minimum Level (ML) and the Method Detection Limit (MDL) with the reported results for each constituent. The MDL should be as close as practicable to the USEPA MDL determined by the procedure found in 40 CFR Part 136. The results of analytical determinations for the presence of chemical constituents in a sample shall use the following reporting protocols:

a. Sample results greater than or equal to the reported ML shall be reported as measured by the laboratory.
b. Sample results less than the reported ML, but greater than or equal to the laboratory's MDL, shall be reported as "Detected but Not Quantified," or DNQ. The estimated chemical concentration of the sample shall also be reported.
c. For the purposes of data collection, the laboratory shall write the estimated chemical concentration next to DNQ as well as the words "Estimated Concentration." Numerical estimates of data quality may be by percent accuracy (+ or – a percentage of the reported value), numerical ranges (low to high), or any other means considered appropriate by the laboratory.
d. Sample results that are less than the laboratory's MDL shall be reported as "Not Detected" or ND.

B. Treatment Pond Monitoring

1. The Discharger shall monitor the Facility's treatment pond as follows:

Parameter	Units	Sample Type	Minimum Sampling Frequency	Required Analytical Test Method
Freeboard	Feet	Measure	1 / week	-
pH	Standard Units	Grab	1 / month	[1]
Dissolved Oxygen	mg/L	Grab	1 / month	[1]

1. Parameters shall be analyzed using the analytical methods described in 40 CFR sections 136; for priority pollutants the methods must meet the lowest minimum levels (MLs) specified in Attachment 4 of the SIP, where no methods are specified for a given pollutant, by methods approved by this Regional Water Board or the State Board.

X. REPORTING REQUIREMENTS

A. General Monitoring and Reporting Requirements – Not Applicable

B. Self Monitoring Reports (SMRs)

1. At any time during the term of this permit, the State or Regional Water Board may notify the Discharger to electronically submit self-monitoring reports. Until such notification is given, the Discharger shall submit self-monitoring reports in accordance with the requirements described below.

2. The Discharger shall submit monthly, quarterly, and annual Self Monitoring Reports including the results of all required monitoring using USEPA-approved test methods or other test methods specified in this Order. Monthly reports shall be due on the 1st day of the second month following the end of each calendar month; Quarterly reports shall be due on May 1, August 1, November 1, and February 1 following each calendar quarter; Annual reports shall be due on February 1 following each calendar year.

3. Monitoring periods and reporting for all required monitoring shall be completed according to the following schedule:

Sampling Frequency	Monitoring Period Begins On…	Monitoring Period	SMR Due Date
Continuous	Day after permit effective date	All	First day of second calendar month following month of sampling
1/week	Sunday following permit effective date or on permit effective date if on a Sunday	Sunday through Saturday	First day of second calendar month following month of sampling
1/month	First day of calendar month following permit effective date or on permit effective date if that date is first day of the month	1st day of calendar month through last day of calendar month	First day of second calendar month following month of sampling
1/quarter	Closest of January 1, April 1, July 1, or October 1 following (or on) permit effective date	January 1 through March 31 April 1 through June 30 July 1 through September 30 October 1 through December 31	May 1 August 1 November 1 February 1
1/year	January 1 following (or on) permit effective date	January 1 through December 31	February 1

4. The Discharger shall report with each sample result the applicable Minimum Level (ML) and the current Method Detection Limit (MDL), as determined by the procedure in 40 CFR Part 136.

5. The Discharger shall arrange all reported data in a tabular format. The data shall be summarized to clearly illustrate whether the facility is operating in compliance with interim and/or final effluent limitations.

6. The Discharger shall attach a cover letter to the SMR. The information contained in the cover letter shall clearly identify violations of the WDRs; discuss corrective actions taken or planned; and the proposed time schedule for corrective actions. Identified violations must include a description of the requirement that was violated and a description of the violation.

7. SMRs must be submitted to the Regional Water Board, signed and certified as required by the standard provisions (Attachment D), to the address listed below:

Submit monitoring reports to:
Central Valley Regional Water Quality Control Board 11020 Sun Center Drive #200 Rancho Cordova, CA 95670-6114

C. Discharge Monitoring Reports (DMRs)

1. When requested by U.S. EPA, the Discharger shall complete and submit Discharge Monitoring Reports. The submittal date shall be no later than the submittal date specified in the Monitoring and Reporting Program for Discharger Self Monitoring Reports.

2. DMRs must be signed and certified as required by the standard provisions (Attachment D). The Discharge shall submit the original DMR and one copy to the address listed below:

   State Water Resources Control Board
   Discharge Monitoring Report Processing Center
   Post Office Box 671
   Sacramento, CA 95812

3. All discharge monitoring results must be reported on the official USEPA pre-printed DMR forms (EPA Form 3320-1). Forms that are self generated or modified cannot be accepted.

D. Other Reports

1. **Quarterly Drug and Chemical Use Report.** The information listed below shall be submitted for all aquaculture drugs or chemicals used at the Facility. This information shall be reported at quarterly intervals and submitted with the quarterly self-monitoring reports using the drug and chemical usage report table found in Attachment H of this Order. At such time as the Discharger is required to begin submitting self-monitoring reports electronically, it shall continue to submit paper copies of the quarterly drug and chemical use reports to the Regional Water Board.

   a. The name(s) and active ingredient(s) of the drug or chemical.
   b. The date(s) of application.

c. The purpose(s) for the application.
d. The method of application (e.g., immersion bath, administered in feed), duration of treatment, whether the treatment was static or flush (for drugs or chemicals applied directly to water), amount in gallons or pounds used, treatment concentration(s), and the flow in cubic feet per second (cfs) in the treatment units.
e. The total flow through the facility in cubic feet per second (cfs) to the receiving water after mixing with the treated water.
f. For drugs and chemicals applied directly to water (i.e., immersion bath, flush treatment) and for which effluent monitoring is not otherwise required, the estimated concentration in the effluent at the point of discharge.
g. The method of disposal for drugs or chemicals used but not discharged in the effluent.

2. **Annual Solids Disposal Report.** An annual solids disposal report shall be submitted with annual self-monitoring reports. The report shall describe the annual volume of solids generated by the Facility and specify the disposal practices. This report must also include a certification that solids disposal methods were consistent with reasonable agronomic loading rates.

Attachment F – Fact Sheet – Table of Contents

ATTACHMENT F – FACT SHEET

As described in Section II of this Order, this Fact Sheet includes the legal requirements and technical rationale that serve as the basis for the requirements of this Order.

I. PERMIT INFORMATION

The following table summarizes administrative information related to the facility.

WDID	WDID
Discharger	Tsar Nicoulai Caviar, LLC and the Ralph F. Nix 1995 Revocable Trust
Name of Facility	Tsar Nicoulai Sturgeon Farm, Wilton
Facility Address	10822 Gay Road
	Wilton, CA 95693
	Sacramento County
Facility Contact, Title and Phone	Jerry Schwartz, General Manager, (415) 543-3007
Authorized Person to Sign and Submit Reports	Jerry Schwartz, General Manager, (415) 543-3007
Mailing Address	60 Dorman Avenue, San Francisco, CA 94124
Billing Address	60 Dorman Avenue, San Francisco, CA 94124
Type of Facility	Concentrated Aquatic Animal Production/ Fish Hatchery (CAAP Facility), SIC Codes 0921 and 0273
Major or Minor Facility	Minor
Threat to Water Quality	2
Complexity	B
Pretreatment Program	Not Applicable
Reclamation Requirements	Not Applicable
Facility Permitted Flow	3.1 million gallons per day (mgd)
Facility Design Flow	Not Applicable
Watershed	North Valley Floor Hydrologic Unit
Receiving Water	Unnamed Tributary of the Cosumnes River
Receiving Water Type	Stream

A. Tsar Nicoulai Caviar, LLC is the owner and operator of the Tsar Nicoulai Sturgeon Farm, a fish farm. Tsar Nicoulai Caviar, LLC and the Ralph F. Nix 1995 Revocable Trust own the property at 10822 Gay Road, Wilton, on which the Facility is located. Together Tsar Nicoulai Caviar, LLC and the Ralph F. Nix 1995 Revocable Trust are hereinafter referred to as Discharger. Tsar Nicoulai Caviar, LLC is responsible for maintaining compliance with this Order. The Ralph F. Nix 1995 Revocable Trust is not responsible for the Facility's operations or the discharge to surface waters. The Ralph F. Nix 1995 Revocable Trust is also not responsible for the solids drying beds on the parcels it owns; however, is ultimately responsible if enforcement actions against Tsar Nicoulai Caviar, LLC are ineffective or would be futile, or if enforcement is necessary to protect public health or the environment. Tsar Nicoulai Caviar, LLC is currently negotiating the purchase of the remaining Facility property from the Ralph F. Nix 1995 Revocable Trust. This Order includes provision that will allow the Regional Water Board to re-

open this Order should the sole ownership of the Facility property be transferred to Tsar Nicoulai Caviar, LLC.

B. The Facility discharges wastewater to a Sacramento County storm drain, which discharges to an unnamed tributary of the Cosumnes River, a water of the United States. Tsar Nicoulai Sturgeon Farm is a new facility that is not currently regulated by a Regional Water Board Order.

C. The Discharger submitted a Report of Waste Discharge (RWD), dated May 9, 2003, and applied for a National Pollutant Discharge Elimination System (NPDES) permit authorization to discharge up to 3.1 mgd of treated wastewater from the Tsar Nicoulai Sturgeon Farm. Supplemental Information was requested on June 25, 2003, and received on October 19, 2004. On December 23, 2004, the application was deemed complete pending the receipt of documents for compliance with CEQA requirements. A site visit was conducted on April 7, 2005, to observe operations and collect additional data to develop permit limitations and conditions.

II. FACILITY DESCRIPTION

The Facility is located on approximately 17 acres, 0.8 miles southwest of Wilton, Sacramento County, within Assessor's Parcel Numbers (APNs) 134-0173-013 and 134-0173-014, as shown in Attachment B.

According to the Discharger's RWD, the Facility raises white sturgeon (*Acipenser transmontanus)* for sale as fresh and smoked meat, and for caviar. The Facility reported an annual production goal of 250,000 pounds (lbs), and approximately 90,000 lbs of food used during the month of maximum feeding (August). Under the NPDES program, the Facility is considered a concentrated aquatic animal production (CAAP) facility.

The wastewater discharges from the Facility include unused food, fish excrement, and algae. The Discharger currently uses sodium chloride (salt) to control fish infections from surface abrasions and the spread of fish disease. The Discharger confirmed during the April 7, 2005 site visit that salt is the only chemical additive that will be used at the Facility. According to the RWD and as confirmed during the site visit, the Discharger does not currently use or plan to use any other aquaculture chemicals or drugs in its operations.

A. Description of Wastewater and Biosolids Treatment or Controls

1. Process supply water is obtained from two wells located in the southeast corner of the Facility. The combined capacity of the two process supply wells is 2150 gpm. The supply water passes through a degassing/aeration tower before it is mixed with process re-circulation water and fed to the fish tanks. Up to 90%, on a long-term basis, of the Facility's process wastewater will be re-circulated. With a 90% re-circulation rate, the Discharger anticipates that the Facility's make-up, or source water demand will be 860 gpm.

2. Facility source water from the degassing/aeration tower flows to a return canal where it mixes with re-circulated wastewater. The water is then pumped to eighteen 50-ft diameter lined steel grow-out tanks. Water from the grow-out tanks, containing fish excrement and unused food is discharged to a drainage canal that conveys the wastewater to three large

drum filters to remove particulates down to 60 µm. Sludge from the drum filters is collected in four settlement tanks configured in series (sludge/solids disposal is discussed below in Section II.A.3 of this Fact Sheet). After filtration, wastewater is channeled through a 2.7 million gallon, U-shaped pond containing aquatic vascular vegetation for direct nutrient uptake and settling. Residual ammonia and dissolved organics are removed by a media based biofiltration system placed within the U-shaped pond. Wastewater from the pond is either discharged offsite or routed to the return canal where it can optionally be sent through a 12-channel biofiltration field for further nutrient removal and temperature modification or re-circulated to the grow-out tanks. Wastewater may be discharged from the treatment pond to Discharge Point 001 through one of two standpipes located within the pond.

3. The solid waste accumulated through the filtration system, and the sludge settlement tanks, approximately 400 lbs/day of uneaten fish feed and fecal material from the fish tanks (wet weight), will be dried in 2500 sq ft unlined drying beds located on a two acre parcel of the Facility's farm. The Facility's maximum annual production of dried fish soil will be approximately 9,000 cubic feet, and will be moved to a covered pile to prevent wind and rain losses and then seasonally applied as mulch and fertilizer to the 0.75 acres of lawns that will surround the onsite employee housing. This Order prohibits the discharge of solids to lands not owned or operated by the Discharger, or in a manner not approved by the Executive Officer.

B. Discharge Points and Receiving Waters

1. Wastewater from the Facility is discharged from the U-shaped nutrient uptake and settling pond to Discharge Point 001, into a Sacramento County drainage ditch along the south side of Gay Road, located at the northeast corner of APN 134-0173-014.

2. Once offsite, wastewater flow continues along the natural storm drainage route, and discharges to an unnamed tributary of the Cosumnes River that flows through APNs 134-0141-012 and 134-0141-011, and is ultimately discharged to the Cosumnes River.

C. Summary of Existing Requirements and Self-Monitoring Report (SMR) Data

The RWD and Discharger Monitoring describe the discharge as follows:

Constituent	Units	Maximum Daily
Flow	mgd	3.1
Ammonia as N	mg/L	0.69
$CBOD_5$@20 °C	mg/L	5.1
Nitrate-N	mg/L	7.7
pH	standard units	6.9 - 8.1 (range)
Total Phosphorous	mg/L	0.45
Total Dissolved Solids	mg/L	220
Volatile Settleable Solids	mg/L	12
Total Suspended Solids	mg/L	18

D. Compliance Summary – Not Applicable

E. Planned Changes

Currently (post Phase I construction), the Facility includes 18 production tanks that are designed to hold standing stocks of 540,000 lbs with an annual production goal of 125,000 lbs. Phase II of the construction process will add an additional 14 production tanks, 12 sorting tanks, a hatchery, and will increase total farm capacities to 1,020,000 lbs of standing stocks with an annual production goal of 250,000 lbs. Other components of Phase II include additions of onsite employee housing, a farm utility building that will offer improved laboratory space, and automated tank monitoring and alarming systems. Implementation of Phase II was planned to begin in late 2004.

III. APPLICABLE PLANS, POLICIES, AND REGULATIONS

The requirements contained in the proposed Order are based on the requirements and authorities described in this section.

A. Legal Authorities

This Order is issued pursuant to section 402 of the Federal Clean Water Act (CWA) and implementing regulations adopted by the U.S. Environmental Protection Agency (USEPA) and Chapter 5.5, Division 7 of the California Water Code (CWC). It shall serve as a NPDES permit for point source discharges from this facility to surface waters. This Order also serves as Waste Discharge Requirements (WDRs) pursuant to Article 4, Chapter 4 of the CWC for discharges that are not subject to regulation under CWA section 402.

B. California Environmental Quality Act (CEQA)

The County of Sacramento recorded a Notice of Exemption for the Facility on September 24, 2004. However, the September 24, 2004 Negative Declaration did not adequately address potential impacts to water quality. Therefore, the Regional Water Board, as lead agency for water quality impacts, has considered the Negative Declaration on DATE, and concurs that compliance with the requirements set forth is this Order will mitigate any significant impacts to water quality.

C. State and Federal Regulations, Policies, and Plans

1. **Water Quality Control Plans.** The Regional Water Board adopted a *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins, Fourth Edition* (hereinafter Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the plan.

   The Basin Plan at page II-2.00 states that the beneficial uses of any specifically identified water body generally applies to its tributary streams. The Basin Plan does not specifically identify beneficial uses for the unnamed tributary of the Cosumnes River, but does identify

present and potential uses for the Cosumnes River, to which the unnamed tributary of the Cosumnes River is tributary. These beneficial uses are municipal and domestic supply (MUN); agricultural supply, irrigation and stock watering (AGR); water contact recreation (REC-1); non-contact water recreation (REC-2); warm freshwater habitat (WARM); cold freshwater habitat (COLD); warm and cold migration of aquatic organisms (MIGR); warm and cold spawning (SPWN); wildlife habitat (WILD). In addition, State Water Resources Control Board (State Water Board) Resolution No. 88-63 requires that, with certain exceptions, the Regional Water Board assign the municipal and domestic supply use to water bodies that do not have beneficial uses listed in the Basin Plan. Thus, as discussed in detail in this Fact Sheet, beneficial uses applicable to the unnamed tributary of the Cosumnes River are as follows:

Discharge Point	Receiving Water Name	Beneficial Use(s)
001	Unnamed Tributary of the Cosumnes River	Existing: MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, WILD.

The Basin Plan on page II-1.00 states: "*Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning…" and with respect to disposal of wastewaters states that "...disposal of wastewaters is* [not] *a prohibited use of waters of the State; it is merely a use which cannot be satisfied to the detriment of beneficial uses*." The federal Clean Water Act, Section 101(a)(2), states: "it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife, and for recreation in and on the water be achieved by July 1, 1983." Federal Regulations, developed to implement the requirements of the Clean Water Act, create a rebuttable presumption that all waters be designated as fishable and swimmable. Federal Regulations, 40 CFR Sections 131.2 and 131.10, require that all waters of the State regulated to protect the beneficial uses of public water supply, protection and propagation of fish, shell fish and wildlife, recreation in and on the water, agricultural, industrial and other purposes including navigation. Section 131.3(e), 40 CFR, defines existing beneficial uses as those uses actually attained after November 28, 1975, whether or not they are included in the water quality standards. Federal Regulation, 40 CFR Section 131.10 requires that uses be obtained by implementing effluent limitations, requires that all downstream uses be protected and states that in no case shall a state adopt waste transport or waste assimilation as a beneficial use for any waters of the United States.

In reviewing whether the existing and/or potential uses of the Cosumnes River apply to the unnamed tributary of the Cosumnes River**,** the Regional Water Board has considered the following facts:

a. **Domestic Supply and Agricultural Supply**

The Regional Water Board is required to apply the beneficial uses of municipal and domestic supply to the unnamed tributary of the Cosumnes River based on State Water Board Resolution No. 88-63 which was incorporated in the Basin Plan pursuant to Regional Water Board Resolution No. 89-056.

b. **Water Contact and Noncontact Recreation and Esthetic Enjoyment**

The Regional Water Board finds that the discharge flows through residential areas, there is ready public access to the receiving water, exclusion of the public is unrealistic and contact recreational activities currently exist along the unnamed tributary of the Cosumnes River and downstream waters. Prior to flowing into the Cosumnes River, the unnamed tributary flows through areas of general public access, meadows, residential areas, and parks. The Cosumnes River also offers recreational opportunities.

c. **Preservation and Enhancement of Fish, Wildlife, and Other Aquatic Resources**

The unnamed tributary flows to the Cosumnes River. The Basin Plan (Table II-1) designates the Cosumnes River as being both a cold and warm freshwater habitat; wildlife habitat; warm and cold migration of aquatic organisms; and warm and cold spawning, reproduction, and/or early development of freshwater organisms. The unnamed tributary supports a private pond before discharging to the Cosumnes River. It is unknown whether the pond support significant aquatic life; however, the Cosumnes River does, and therefore these beneficial uses apply to its unnamed tributaries.

Upon review of the flow conditions, habitat values, and beneficial uses of the unnamed tributary of the Cosumnes River, and the facts described above, the Regional Water Board finds that the beneficial uses identified in the Basin Plan for the Cosumnes River are applicable to the unnamed tributary in the vicinity of the discharge.

2. **National Toxics Rule (NTR) and California Toxics Rule (CTR).** USEPA adopted the NTR on December 22, 1992, which was amended on May 4, 1995 and November 9, 1999, and the CTR on May 18, 2000, which was amended on February 13, 2001. These rules include water quality criteria for priority pollutants and are applicable to this discharge.

3. **State Implementation Policy.** On March 2, 2000, the State Water Board adopted the *Policy for Implementation of Toxics Standards for Inland Surface Waters, Enclosed Bays, and Estuaries of California* (State Implementation Policy or SIP*).* The SIP became effective on April 28, 2000, with respect to the priority pollutant criteria promulgated for California by the USEPA through the NTR and to the priority pollutant objectives established by the Regional Water Boards in their basin plans, with the exception of the provision on alternate test procedures for individual discharges that have been approved by USEPA Regional Administrator. The alternate test procedures provision was effective on May 22, 2000. The SIP became effective on May 18, 2000. The SIP includes procedures for determining the need for and calculating water quality-based effluent limitations (WQBELs), and requires Dischargers to submit data sufficient to do so.

4. **Compliance Schedules and Interim Requirements.** In accordance with Section 2.1 of the SIP, compliance schedules and interim requirements may only be granted to existing discharges. Since Facility's discharge is a new pollutant source, compliance schedules and interim requirements may not be granted in this Order.

5. **Antidegradation Policy.** The permitted discharge is consistent with the antidegradation provisions of 40 CFR 131.12 and State Water Resources Control Board Resolution 68-16. Compliance with these requirements will result in the use of best practicable treatment or control of the discharge. The impact on existing water quality will be insignificant.

6. **Anti-Backsliding Requirements.** Sections 402(o)(2) and 303(d)(4) of the CWA and 40 CFR Section122.44(l) prohibit backsliding in NPDES permits. These anti-backsliding provisions require that effluent limitations in a reissued permit must be as stringent as those in the previous permit, with some exceptions in which limitations may be relaxed. This is a new NPDES permit; therefore anti-backsliding provisions do not apply.

7. **Monitoring and Reporting Requirements.** Section 122.48 of 40 CFR requires that all NPDES permits specify requirements for recording and reporting monitoring results. Sections 13267 and 13383 of the CWC authorize the Regional Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program (MRP) establishes monitoring and reporting requirements to implement federal and State requirements. This MRP is provided in Attachment E.

8. **Storm Water Requirements.** U.S. EPA promulgated Federal Regulations for storm water on November 16, 1990 in 40 CFR Parts 122, 123, and 124. The NPDES Industrial Storm Water Program does not regulate storm water discharges from Concentrated Aquatic Animal Production Facilities or Fish Hatcheries.

D. Impaired Water Bodies on CWA 303(d) List

The unnamed tributary of the Cosumnes River is not listed as an impaired water body.

E. Other Plans, Policies and Regulations – Not Applicable

IV. RATIONALE FOR EFFLUENT LIMITATIONS AND DISCHARGE SPECIFICATIONS

Effluent limitations and toxic and pretreatment effluent standards established pursuant to Sections 301 (Effluent Limitations), 302 (Water Quality Related Effluent Limitations), 304 (Information and Guidelines), and 307 (Toxic and Pretreatment Effluent Standards) of the Clean Water Act (CWA) and amendments thereto are applicable to the discharge.

The federal Clean Water Act (CWA) mandates the implementation of effluent limitations that are as stringent as necessary to meet water quality standards established pursuant to state or federal law. (33 U.S.C., Section 1311(b)(1)(C); 40 C.F.R., Section 122.44(d)(1)) NPDES permits must incorporate discharge limits necessary to ensure that water quality standards are met. This requirement applies to narrative criteria as well as to criteria specifying maximum amounts of particular pollutants. Pursuant to Federal Regulations, 40 C.F.R. section 122.44(d)(1)(i), NPDES permits must contain limits that control all pollutants that "*are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality*." Federal Regulations, 40 CFR, Section 122.44(d)(1)(vi), further provide that "[w]*here a state has not established a water quality criterion for a specific chemical pollutant that is present in an effluent*

at a concentration that causes, has the reasonable potential to cause, or contributes to an excursion above a narrative criterion within an applicable State water quality standard, the permitting authority must establish effluent limits."

The Regional Water Board's Basin Plan, page IV-17.00 contains an implementation policy ("Policy for Application of Water Quality Objectives") that specifies that the Regional Water Board "*will, on a case-by-case basis, adopt numerical limitations in orders which will implement the narrative objectives*." This Policy complies with 40 CFR 122.44(d)(1). With respect to narrative objectives, the Regional Water Board must establish effluent limitations using one or more of three specified sources, including EPA's published water quality criteria, a proposed state criterion (*i.e.*, water quality objective), or an explicit state policy interpreting its narrative water quality criteria (*i.e.*, the Regional Water Board's "Policy for Application of Water Quality Objectives")(40 C.F.R. 122.44(d)(1) (vi) (A), (B) or (C)). The Basin Plan contains a narrative objective requiring that: "*All waters shall be maintained free of toxic substances in concentrations that produce detrimental physiological responses in human, plant, animal, or aquatic life*". The Basin Plan requires the application of the most stringent objective necessary to ensure that surface water and groundwater do not contain chemical constituents, toxic substances, radionuclides, or taste and odor producing substances that adversely affect beneficial uses. The beneficial uses include MUN, AGR, REC-1, REC-2, WARM, COLD, MIGR, SPWN, and WILD. The Basin Plan states that material and relevant information, including numeric criteria, and recommendations from other agencies and scientific literature will be utilized in evaluating compliance with the narrative toxicity objective. The Basin Plan also limits chemical constituents in concentrations that adversely affect surface water beneficial uses. For waters designated as municipal, the Basin Plan specifies that, at a minimum, waters shall not contain concentrations of constituents that exceed Maximum Contaminant Levels (MCL) of CCR Title 22. The Basin Plan further states that, to protect all beneficial uses, the Regional Water Board may apply limits more stringent than MCLs. When a reasonable potential exists for exceeding a narrative objective, Federal Regulations mandate numerical effluent limitations and the Basin Plan clearly establishes a procedure for translating the narrative objectives into numerical effluent limitations.

A. Discharge Prohibitions

1. As stated in Section I.G of Attachment D, Federal Standard Provisions, this Order prohibits bypass from any portion of the treatment Facility. Federal Regulations, 40 CFR 122.41 (m), define "bypass" as the intentional diversion of waste streams from any portion of a treatment facility. This section of the Federal Regulations, 40 CFR 122.41 (m)(4), prohibits bypass unless it is unavoidable to prevent loss of life, personal injury, or severe property damage. In considering the Regional Water Board's prohibition of bypasses, the State Water Resources Control Board adopted a precedential decision, Order No. WQO 2002-0015, which cites the Federal Regulations, 40 CFR 122.41(m), as allowing bypass only for essential maintenance to assure efficient operation. In the case of United States v. City of Toledo, Ohio (63 F. Supp 2d 834, N.D. Ohio 1999) the Federal Court ruled that "any bypass which occurs because of inadequate plant capacity is unauthorized…to the extent that there are 'feasible alternatives', including the construction or installation of additional treatment capacity".

2. Fish raised in CAAP facilities may become vulnerable to disease and parasite infestations. Various aquaculture drugs and chemicals may be used periodically at CAAP facilities to

ensure the health and productivity of the confined fish population, as well as to maintain production efficiency. Aquaculture drugs and chemicals may be used to treat fish for parasites, fungal growths and bacterial infections. Also, aquaculture drugs and chemicals are sometimes used to anesthetize fish prior to spawning or "tagging" processes. The Discharger confirmed during the April 7, 2005 site visit that salt is the only chemical additive that will be used at the Facility. Therefore, this Order prohibits the use and discharge of aquaculture drugs and chemicals, other than salt, from the Facility without first submitting a RWD and receiving a permit authorizing the discharge from the Regional Water Board.

B. Technology-Based Effluent Limitations

1. Scope and Authority

a. A cold-water concentrated aquatic animal production (CAAP) facility is defined in Title 40 of the Code of Federal Regulations (40 CFR 122.24) as a fish hatchery, fish farm, or other facility that contains, grows, or holds cold-water fish species or other cold-water aquatic animals in ponds, raceways, or other similar structures. In addition, the facility must discharge at least 30 calendar days per year, produce at least 20,000 pounds (9,090 kilograms) harvest weight of aquatic animals per year, and feed at least 5,000 pounds (2,272 kilograms) of food during the calendar month of maximum feeding. A facility that does not meet the above criteria may also be designated a cold-water CAAP facility upon a determination that the facility is a significant contributor of pollution to waters of the United States [40 CFR 122.24(c)]. Cold-water, recirculating CAAP facilities are designed to minimize water requirements, which leads to small-volume, concentrated waste streams as well as makeup water overflow. Waste streams from recirculating systems are typically a small but continuous flowing effluent. Flows from CAAP facilities ultimately are discharged to waters of the United States and of the State. 40 CFR 122.24 specifies that CAAP facilities are point sources subject to the National Pollutant Discharge Elimination System (NPDES) program. The Discharger's facility meets the NPDES definition of a cold-water, recirculating CAAP facility.

b. The operation of CAAP facilities may introduce a variety of pollutants into receiving waters. USEPA identifies three classes of pollutants: (1) conventional pollutants (i.e., total suspended solids (TSS), oil and grease (O&G), biochemical oxygen demand (BOD), fecal coliform, and pH); (2) toxic pollutants (e.g., metals such as copper, lead, nickel, and zinc and other toxic pollutants; and (3) non-conventional pollutants (e.g., ammonia-N, Formalin, and phosphorus). Some of the most significant pollutants discharged from CAAP facilities are solids from uneaten feed and fish feces that settle to the bottom of the raceways. Both of these types of solids are primarily composed of organic matter including BOD, organic nitrogen, and organic phosphorus.

c. On August 23, 2004 USEPA published Effluent Limitation Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category (hereafter "ELG"). These ELGs became effective on September 22, 2004. The ELG regulation establishes national technology-based effluent discharge requirements for flow-through and recirculation systems and for net pens based on BPT, BCT, BAT and NSPS. In its proposed rule, published on September 12, 2002, USEPA proposed to

establish numeric limitations for a single constituent – total suspended solids (TSS) – while controlling the discharge of other constituents through narrative requirements. In the final rule, however, USEPA determined that, for a nationally applicable regulation, it would be more appropriate to promulgate qualitative TSS limitations in the form of solids control best management practices (BMP) requirements. Furthermore, the final ELG does not include numeric effluent limitations for non-conventional and toxic constituents, such as aquaculture drugs and chemicals, but also relies on narrative limitations to address these constituents. The final ELG applies to CAAP facilities that produce, hold or contain 100,000 pounds or more of aquatic animals per year (any 12 month period). The Discharger's facility is therefore subject to ELG requirements.

2. Applicable Technology-Based Effluent Limitations

a. **Total Suspended Solids (TSS) and Settleable Solids.** USEPA's final ELG for the aquaculture industry does not include numeric effluent limitations on any conventional, non-conventional, or toxic constituents. Rather, USEPA promulgated qualitative limitations in the form of BMP requirements. Technology-based requirements in this Order are based on the ELG. To comply with the ELG, this Order includes a narrative effluent limitation that requires the Discharger to minimize the discharge of total suspended solids to the BAT/BCT through implementing best management practices established in Special Provision VI.C.3 of this Order.

b. **Flow.** This Order contains a maximum daily effluent discharge flow limitation of 3.1 mgd and an average monthly effluent discharge flow limitation of 1.2 mgd based on the maximum daily effluent flow of 3.1 mgd and long term average effluent flow of 1.2 mgd reported in the Discharger's RWD, respectively. In accordance with 40 CFR Section 122.45, this Order includes mass effluent limitations based on the long term average effluent flow of 1.2 mgd reported in the Discharger's RWD.

3. Final Technology-Based Effluent Limitations

Table F-1 summarizes the final technology-based effluent limitations established in this Order.

Table F-1
Summary of Technology-based Effluent Limitations
Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Flow	mgd	1.2	--	3.1	--	--
The Discharger shall minimize the discharge of Total Suspended Solids to the BAT/BCT through implementing best management practices established in Special Provision VI.C.3 of this Order.						

C. Water Quality-Based Effluent Limitations (WQBELs)

1. Scope and Authority

As specified in 40 CFR Section122.44(d)(1)(i), permits are required to include WQBELs for pollutants (including toxicity) that are or may be discharged at levels that cause, have reasonable potential to cause, or contribute to an excursion above any state water quality standard. The process for determining reasonable potential and calculating WQBELs when necessary is intended to protect the designated uses of the receiving water as specified in the Basin Plan, and achieve applicable water quality objectives and criteria that are contained in other state plans and policies, or water quality criteria contained in the CTR and NTR.

2. Applicable Beneficial Uses and Water Quality Criteria and Objectives

a. The receiving water body is an unnamed tributary of the Cosumnes River that flows through neighboring properties, and is utilized in a private pond. The Regional Water Board finds that based on the available information and on the Discharger's application, that unnamed tributary of the Cosumnes River, absent the discharge, is an ephemeral stream. The ephemeral nature of unnamed tributary of the Cosumnes River means that the designated beneficial uses must be protected, but that no credit for receiving water dilution is available. Although the discharge, at times, maintains the aquatic habitat, constituents may not be discharged that may cause harm to aquatic life. At other times, natural flows within the unnamed tributary of the Cosumnes River help support the aquatic life. Both conditions may exist within a short time span, where the unnamed tributary of the Cosumnes River would be dry without the discharge and periods when sufficient background flows provide hydraulic continuity with the Cosumnes River. Dry conditions occur primarily in the summer months, but dry conditions may also occur throughout the year, particularly in low rainfall years. The lack of dilution results in more stringent effluent limitations to protect contact recreational uses, drinking water standards, agricultural water quality goals and aquatic life. Therefore, the Regional Water Board has evaluated the need for water quality-based effluent limitations for pollutants without benefit of dilution in this Order. These water quality-based effluent limitations are based on the application of water quality criteria or objectives at the point of discharge (Discharge 001).

b. The minimum effluent hardness, maximum receiving water pH limitation, and estimated effluent temperature were used to develop hardness, pH, and/or temperature dependent WQBELs. Effluent, instead of receiving water hardness and temperature were used to develop these limitations because receiving water data (unnamed tributary of the Cosumnes River) in the vicinity of the discharge are unavailable. These worst-case values have been chosen to protect the beneficial uses of the receiving water and are summarized below:

Hardness:	130 mg/L
pH:	8.5 standard units
Temperature:	75 °F

3. Determining the Need for WQBELs

a. Reasonable potential (RP) was determined by calculating the projected maximum effluent concentration (MEC) for each constituent and comparing it to applicable water quality criteria; if a criterion was exceeded, the discharge was determined to have reasonable potential to exceed a water quality objective for that constituent. The projected MEC is determined by multiplying the observed MEC by a factor that accounts for statistical variation. The multiplying factor is determined (for 99% confidence level and 99% probability basis) using the number of results available and the coefficient of variation (standard deviation divided by the mean) of the sample results. In accordance with the SIP, non-detect results were counted as one-half the detection level when calculating the mean. For all constituents for which the source of the applicable water quality standard is the CTR or NTR, the multiplying factor is 1. Reasonable potential evaluation was based on the methods used in the SIP and the U.S. EPA Technical Support Document for Water Quality-Based Toxics Control [EPA/505/2-90-001].

b. Federal regulations require effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause, or contribute to an in-stream excursion above a narrative or numerical water quality standard. Based on information submitted as part of the application, in studies, and as directed by monitoring and reporting programs the Regional Water Board finds that the discharge does have a reasonable potential to cause or contribute to an in-stream excursion above a water quality standard for iron, manganese, chloride, nitrate, ammonia, electrical conductivity, and total dissolved solids. Effluent limitations for these constituents are included in this Order.

c. The reasonable potential analysis for detected constituents is summarized below in Table F-2. Background data for the receiving water have not been summarized because no data are available.

Table F-2.
RPA Summary for Detected Constituents
Discharge 001

Parameter	Units	MEC[1]	99th MEC[1]	WQO/ WQC[2]	Source	RP[3]
Arsenic	µg/L	4.1	54	10	USEPA Primary MCL	I[4]
Chromium III	µg/L	0.66	8.7	50	California Primary MCL	N
Copper	µg/L	1.4	1.4	12/18	CTR CCC/CMC	N
Mercury	µg/L	0.002	0.002	0.05	CTR HH	N
Nickel	µg/L	6.5	6.5	65/590	CTR CCC/CMC	N
Zinc	µg/L	6.5	6.5	150	CTR CCC/CMC	N
Toluene	µg/L	1.1	14	42	USEPA Taste and Odor	N

Parameter	Units	MEC[1]	99th MEC[1]	WQO/ WQC[2]	Source	RP[3]
Aluminum	µg/L	61	805	87/750	USEPA Recommended National Water Quality CCC/CMC	I[4]
Barium	µg/L	48	634	1000	California Primary MCL	N
Iron	µg/L	390	5148	300	California Secondary MCL	Y
Manganese	µg/L	300	3960	50	California Secondary MCL	Y
Fluoride	µg/L	220	2904	1000	California PHG, Drinking Water	I[4]
Chloride	mg/L	8.1	107	106	Water Quality for Agriculture	Y[5]
Nitrate	mg/L	7.7	43	10	California Primary MCL	Y
Nitrite	µg/L	120	1584	700	USEPA IRIS	I[4]
Sulfate	mg/L	5.1	67	250	California Secondary MCL	N
Ammonia as N	µg/L	690	3864	591/2140	USEPA Recommended National Water Quality Criteria	Y
MBAS	µg/L	73	964	500	DHS Action Level, Drinking Water	I[4]
Electrical Conductivity	µmhos/cm	320	4224	700	Water Quality for Agriculture	Y[5]
Total Dissolved Solids	mg/L	220	1232	450	Water Quality for Agriculture	Y[5]

1. MEC: maximum effluent concentration. 99th MEC: maximum predicted effluent concentration using 99th percentile multiplier, note that multiplier is equal to "1" when applying CTR criteria.
2. WQO: water quality objective. WQC: water quality criteria.
3. Reasonable potential.
4. Indeterminate, inadequate information to establish limitations. See discussion below.
5. Reasonable potential found due to use of salt at the facility

d. **Total Iron.** The Basin Plan includes a water quality objective that "…water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of Regulations…Tables 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449." Municipal and domestic supply is a beneficial use of the receiving stream. Based on information included in analytical laboratory reports submitted by the Discharger, iron in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary Maximum Contaminant Level (MCL)-Consumer Acceptance Limit of 300 µg/L. The Basin Plan also includes a water quality objective that water "…shall be free of discoloration that causes nuisance or adversely affects beneficial uses." The Basin Plan identifies non-contact water recreation, which includes aesthetic enjoyment, as a beneficial use of the Receiving Water. Iron concentrations in excess of the Secondary MCL-Consumer Acceptance Limit cause aesthetically undesirable discoloration. The maximum observed effluent iron concentration was 390 µg/L. An average monthly effluent limitation (AMEL) of 300 µg/L for total iron is included in this Order and is based on the Basin Plan water quality objectives for chemical constituents and color and the DHS Secondary MCL. It is unknown whether the Discharger can meet these new effluent limitations for iron.

e. **Total Manganese.** The Basin Plan includes a water quality objective that "…water designated for use as domestic or municipal supply (MUN) shall not contain concentrations of chemical constituents in excess of the maximum contaminant levels (MCLs) specified in the following provisions of Title 22 of the California Code of

Regulations…Tables 64449-A (Secondary Maximum Contaminant Levels-Consumer Acceptance Limits) and 64449-B (Secondary Maximum Contaminant Levels-Ranges) of Section 64449." Municipal and domestic supply is a beneficial use of the receiving stream. Based on information included in analytical laboratory reports submitted by the Discharger, manganese in the discharge has a reasonable potential to cause or contribute to an in-stream excursion above the Secondary Maximum Contaminant Level (MCL)-Consumer Acceptance Limit of 50 µg/L. The maximum observed effluent manganese concentration was 300 µg/L. An AMEL of 50 µg/L for total manganese is included in this Order and is based on the Basin Plan water quality objectives for chemical constituents and the DHS Secondary MCL.

f. **Nitrate.** Nitrate is known to cause adverse health effects in humans. The Basin Plan's chemical constituents water quality objective prohibits chemical constituents in concentrations that exceed drinking water MCLs published in Title 22 of the California Code of Regulations or that adversely affect beneficial uses. Municipal and domestic water supply is a beneficial use of the receiving stream. The California Department of Health Services (DHS) has adopted a Primary MCL for the protection of human health for nitrate that is equal to 10 mg/L (measured as nitrogen). The maximum observed effluent nitrate concentration was 7.7 mg/L, with a projected maximum effluent concentration of 43 mg/L. The projected maximum effluent concentration for nitrate has the reasonable potential to exceed the Basin Plan's "Chemical Constituent" objective. Therefore, this Order includes an AMEL for nitrate of 10 mg/L (measured as nitrogen), considering protection of the Basin Plan objective.

g. **Ammonia.** Ammonia can be toxic to aquatic organisms in surface waters. Aquatic habitat is a beneficial use of the receiving stream. USEPA has developed Ambient Water Quality Criteria for ammonia. Applying 40 CFR Section 122.44(d)(1)(vi)(B), it is appropriate to use USEPA's Ambient National Water Quality Criteria for the Protection of Freshwater Aquatic Life for ammonia, which was developed to be protective of aquatic organisms. The acute criterion for ammonia is dependent on pH and fish species present, and the chronic criterion is dependent on pH and temperature. In general, ammonia toxicity increases with increases in pH and temperature. At lower temperatures, the chronic criterion is also dependent on the presence or absence of early life stages of fish (ELS).

The beneficial uses of the receiving water include warm freshwater aquatic habitat (WARM), cold freshwater aquatic habitat (COLD), migration of aquatic organisms (MIGR) in warm and cold habitat, warm habitat spawning (SPWN). The early life stages of fish are likely present during the permitted period of discharge.

The Basin Plan maximum receiving water pH limitation of 8.5 units and estimated temperature of 75°F were used to determine the USEPA Recommended Ambient Water Quality Criterion for Fresh Water Aquatic Life, 30 day average chronic criteria, or criterion continuous concentration for ammonia of 0.59 mg as N (Nitrogen)/L. Additionally, the highest 4 day average concentration within the 30-day period should not exceed 2.5 times this criterion (2.5 x 0.59 = 1.5 mg as N/L). Considering the

maximum pH value of 8.5 pH Units and the presence of salmonids, the USEPA Recommended Ambient Water Quality Criterion for Fresh Water Aquatic Life, maximum 1-hour acute criteria, or criteria maximum concentration for ammonia is 2.1 mg as N/L.

Ammonia was detected in the Discharger's effluent at a concentration of 0.69 mg/L. Using the TSD reasonable potential analysis procedure, the projected MEC of ammonia in the effluent is 3.9 mg/L; therefore, there is a reasonable potential that the discharge may exceed the USEPA chronic and acute criteria for ammonia and cause or contribute to an excursion above the narrative toxicity objective. This Order contains an AMEL considering the USEPA chronic criteria, and a one-hour maximum effluent limitation considering USEPA's acute ammonia criteria.

h. **Sodium Chloride, chloride, EC and TDS.** The Discharger reports that sodium chloride (salt) is used at the Facility. Sodium chloride is used as a stress reducer, infection inhibitor, osmoregulatory enhancer, and as a treatment for fish lice. FDA considers sodium chloride an unapproved new animal drug of low regulatory priority (LRP drug) for use in aquaculture. Consequently, FDA is unlikely to take regulatory action if an appropriate grade is used, good management practices are followed, and local environmental requirements are met.

In water, sodium chloride breaks apart into an aqueous solution of sodium and chloride ions that contribute to total dissolved solids (TDS) concentrations. TDS are solids that can be dissolved in water. These solids may include carbonate, bicarbonate, chloride, sulfate, phosphate, nitrate, calcium magnesium, sodium, organic ions, and other ions. The salinity of wastewater is determined by measuring electrical conductivity to measure the ability of a water molecule to carry an electrical current, a property that is proportional to the concentration of ions in solution. When salts dissolve in water, ions are formed and the solution will conduct electricity. Conductivity increases with salinity because of the increasing presence of ions (usually sodium and chloride ions).

The Basin Plan contains a narrative objective for chemical constituents that state, in part, "Waters shall not contain chemical constituents in concentrations that adversely affect beneficial uses." Agricultural irrigation is a beneficial use of the receiving water. *Water Quality for Agriculture, Food and Agriculture Organization of the United Nations—Irrigation and Drainage Paper No. 29, Rev. 1* (R.S. Ayers and D.W. Westcot, Rome, 1985), recommends that the electrical conductivity (EC) level in waters used for agricultural irrigation not exceed 700 µmhos/cm (Agricultural Water Quality Goal) because it will reduce crop yield for sensitive plants. The Agricultural Water Quality Goal for TDS is 450 mg/L. The Agricultural Water Quality Goal for chloride is 106 mg/L.

Because dissolved ions in water increase EC, the measures of TDS, chloride ion, and EC are related. Therefore, effectively controlling the level of EC in an effluent will also result in the presence of less TDS and chloride in the effluent. Due to the direct application of salt to water flowing through the facility and, therefore, the potential discharge of salt, the Regional Water Board has determined that the discharger may

cause, have the reasonable potential to cause, or contribute to an in-stream excursion of the narrative water quality objective for chemical constituents. Applying the Basin Plan "Policy for Application of Water Quality Objectives", the numeric standard that implements the narrative objective is the Agricultural Water Quality Goal of 700 µmhos/cm. Therefore, an effluent limitation for EC at 25°C of 700 µmhos/cm as a monthly average is necessary in order to ensure protection of both the agricultural and aquatic life beneficial uses of receiving waters. Given that an effluent limitation for EC is included, and because of the direct relationship between EC, TDS and chloride, this Order does not include effluent limitations for TDS or chloride. However, in order to establish the specific relationship between EC, TDS and chloride in the Discharger's effluent, both TDS and chloride monitoring are required.

The effluent limitation established for EC in this Order has been established as a maximum limitation due to the limited monitoring data available to the Regional Board during the development of this Order. This Order assigns maximum EC limits and monitoring to gather information and may be reopened to include more stringent EC effluent limits should future monitoring indicate the need.

i. **pH.** The Basin Plan includes numeric water quality objectives that the pH "…not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses." The receiving water is designated as having both COLD and WARM beneficial uses. An effluent limitation for pH is included in this Order, and is based on the Basin Plan objectives for pH.

j. **Arsenic, Aluminum, Fluoride, Nitrite, and Methylene Blue Active Substances (MBAS).** Insufficient information is available to determine whether arsenic, aluminum, fluoride, chloride, nitrate, and MBAS levels in the discharge have reasonable potential to cause or contribute to an in-stream excursion above applicable water quality objectives. There is only one effluent data point available for each of these constituents; also, as indicated in Table F-2, each data point is less than the respective WQO. Instead of limitations, additional monitoring has been established for these constituents with a re-opener provision should monitoring results indicate that the discharge has the reasonable potential to cause an exceedance of water quality objectives for these constituents.

4. WQBEL Calculations

a. The Discharger conducted monitoring for priority and non-priority pollutants. The analytical results of one comprehensive sampling event were submitted to the Regional Water Board. The results of this sampling event were used in developing the requirements of this Order. Effluent limitations are included in this Order to protect the beneficial uses of the receiving stream and to ensure that the discharge complies with the Basin Plan objective that toxic substances not be discharged in toxic amounts.

b. **Calculations for Effluent Limitations.** In calculating maximum effluent limitations, the effluent concentration allowances were set equal to the criteria/standards/objectives.

$$ECA_{acute} = CMC \qquad ECA_{chronic} = CCC$$

$$ECA_{HH} = HH$$

where: ECA_{acute} = effluent concentration allowance for acute (one-hour average) toxicity criterion
$ECA_{chronic}$ = effluent concentration allowance for chronic (four-day average) toxicity criterion
ECA_{HH} = effluent concentration allowance for human health, agriculture, or other long-term criterion/objective
CMC = criteria maximum concentration (one-hour average)
CCC = criteria continuous concentration (four-day average, unless otherwise noted)
HH = human health, agriculture, or other long-term criterion/objective

Acute and chronic toxicity ECAs were then converted to equivalent long-term averages (LTA) using statistical multipliers and the lowest is used. Additional statistical multipliers were then used to calculate the maximum daily effluent limitation (MDEL) and the average monthly effluent limitation (AMEL). The statistical multipliers were calculated using data shown in Table 1.

Human health ECAs are set equal to the AMEL and a statistical multiplier is used to calculate the MDEL.

$$MDEL = mult_{MDEL}\left[\min\left(\overbrace{M_A ECA_{acute}}^{LTA_{acut}}, \underbrace{M_C ECA_{chronic}}_{LTA_{chronic}}\right)\right]$$

$$MDEL_{HH} = \left(\frac{mult_{MDEL}}{mult_{AMEL}}\right) AMEL_{HH}$$

where: $mult_{AMEL}$ = statistical multiplier converting minimum LTA to AMEL
$mult_{MDEL}$ = statistical multiplier converting minimum LTA to MDEL
M_A = statistical multiplier converting CMC to LTA
M_C = statistical multiplier converting CCC to LTA

c. **Mass-based Effluent Limitations.** In accordance with 40 CFR 122.45(b)(2), mass-based limitations were calculated by multiplying the concentration limitation by the long-term average flow (1.2 mgd) and the appropriate unit conversion factors.

Mass-based effluent limitations, or mass emission rates (MERs), for WQBELs applicable to Discharge 001 are calculated as follows:

$$MER = 8.34\left(\frac{lb-L}{mg-gal}\right) \times AMEL-or-MDEL \times 1.2(mgd)$$

d. **Final WQBELs.** Table F-3 summarizes the final WQBELs contained in this Order.

Table F-3
Summary of Water Quality-based Effluent Limitations
Discharge Point 001

Parameter	Units	Effluent Limitations				
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum
Total Iron	µg/L	300	--	--	--	--
	lbs/day	3.0	--	--	--	--
Total Manganese	µg/L	50	--	--	--	--
	lbs/day	0.50	--	--	--	--
Nitrate Nitrogen	mg/L	10	--	--	--	--
	lbs/day	100	--	--	--	--
Total Ammonia as N	mg/L	0.59	--	--	--	--
	lbs/day	5.9	--	--	--	--
Electrical Conductivity	µmhos/cm	700	--	--	--	--
pH	standard units	--	--	--	6.5	8.5
The maximum 1-hour average effluent ammonia as N in the discharge shall not exceed 2.1 mg/L or 21 lbs/day.						

5. Whole Effluent Toxicity (WET)

The Basin Plan specifies a narrative objective for toxicity, requiring that "All waters shall be maintained free of toxic substances in concentrations that are toxic to, or that produce detrimental physiological responses in human, plant, animal, or aquatic life." Compliance with this objective will be determined by use of indicator organisms, analyses of species diversity, population density, growth anomalies, bioassays of appropriate duration and/or other appropriate methods as specified by the Regional Water Board. The survival of aquatic life in surface waters subjected to a waste discharge, or other controllable water quality factors, shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary, for other control water that is consistent with the requirements for "experimental water" as defined in Standard Methods for the Examination of Water and Wastewater (American Public Health Association, et al. 1992).

In addition to the Basin Plan requirements, Section 4 of the SIP states that a chronic toxicity effluent limitation is required in permits for all discharges that will cause, have the reasonable potential to cause, or contribute to chronic toxicity in receiving waters.

Numeric water quality criteria, or Basin Plan numeric objectives currently are not available for many of the aquaculture drugs and chemicals used by aquaculture facilities. Therefore, the Regional Water Board uses the narrative water quality objective for toxicity from the Basin Plan as a basis for determining "reasonable potential" for discharges of these drugs and chemicals. USEPA's *Technical Support Document Water Quality-based Toxics Control* (TSD) specifies two toxicity measurement techniques that can be employed in effluent characterization; the first is Whole Effluent Toxicity (WET) testing, and the second is chemical-specific toxicity analyses. Whole effluent toxicity (WET) requirements protect the receiving water quality from the aggregate toxic effect of a mixture of pollutants in the effluent. WET tests measure the degree of response of exposed aquatic test organisms to an effluent. The WET approach allows for protection of the narrative "no toxics in toxic amounts" criterion while implementing numeric criteria for toxicity. There are two types of WET tests: acute and chronic. An acute toxicity test is conducted over a short time period and generally measures mortality. A chronic toxicity test is conducted over a longer period of time and may measure mortality, reproduction, and growth. For fish hatcheries WET testing is used most appropriately when the toxic constituents in an effluent are not completely known; whereas chemical-specific analysis is more appropriately used when an effluent contains only one, or very few, well-known constituents.

Due to the nature of operations and chemical treatments at this Facility, its effluent contains only two known chemicals at any given time (ammonia and NaCl). Therefore, the Regional Water Board is using a chemical-specific approach to determine "reasonable potential" for discharges of aquaculture drugs and chemicals, and ammonia.

D. Final Effluent Limitations

1. 40 CFR Section122.45 states that:

   > "…All pollutants limited in permits shall have limitations…expressed in terms of mass except…[f]or pH, temperature, radiation, or other pollutants which cannot appropriately be expressed by mass…Pollutants limited in terms of mass additionally may be limited in terms of other units of measurement, and the permit shall require the permittee to comply with both limitations."

2. Table F-4 summarizes the final technology-based and water quality-based effluent limits established in this Order.

Table F-4
Summary of Final Effluent Limitations
Discharge Point 001

Parameter	Units	Effluent Limitations					Basis
		Average Monthly	Average Weekly	Maximum Daily	Instantaneous Minimum	Instantaneous Maximum	
Flow	mgd	1.2	--	3.1	--	--	BPJ
Total Iron	µg/L	300	--	--	--	--	Basin Plan
	lbs/day	3.0	--	--	--	--	
Total Manganese	µg/L	50	--	--	--	--	Basin Plan
	lbs/day	0.50	--	--	--	--	
Nitrate Nitrogen	mg/L	10	--	--	--	--	Basin Plan
	lbs/day	100	--	--	--	--	
Total Ammonia as N	mg/L	0.59	--	--	--	--	Basin Plan
	lbs/day	5.9	--	--	--	--	
Electrical Conductivity	µmhos/cm	700	--	--	--	--	Basin Plan
pH	standard units	--	--	--	6.5	8.5	Basin Plan
The maximum 1-hour average effluent ammonia as N in the discharge shall not exceed 2.1 mg/L or 21 lbs/day.							Basin Plan
The Discharger shall minimize the discharge of total suspended solids to the BAT/BCT through implementing best management practices established in Special Provision VI.C.3 of this Order.							40 CFR Part 451

E. Interim Effluent Limitations – Not Applicable

F. Land Discharge Specifications – Not Applicable

G. Reclamation Specifications – Not Applicable

V. RATIONALE FOR RECEIVING WATER LIMITATIONS

A. Surface Water

1. The Clean Water Act, Section 303(a-c), required states to adopt numeric criteria where they are necessary to protect designated uses. The Regional Water Board adopted numeric criteria in the Basin Plan. The Basin Plan is a regulatory reference for meeting the state and federal requirements for water quality control (40 CFR 131.20). State Water Board Resolution No. 68-16, the Antidegradation Policy, does not allow changes in water quality less than that prescribed in Water Quality Control Plans (Basin Plans). The Basin Plan states that; "The numerical and narrative water quality objectives define the least stringent standards that the Regional Water Board will apply to regional waters in order to protect the beneficial uses." This Order contains Receiving Water Limitations based on the Basin Plan numerical and narrative water quality objectives for Biostimulatory Substances, Chemical Constituents, Color, Dissolved Oxygen, Floating Material, Oil and Grease, pH, Pesticides, Radioactivity, Salinity, Sediment, Settleable Material, Suspended Material, Tastes and Odors, Temperature, Toxicity and Turbidity.

2. **Fecal Coliform.** The unnamed tributary of the Cosumnes River has been designated as having the beneficial use of contact recreation (REC-1). For water bodies designated as having REC-1 as a beneficial use, the Basin Plan includes a water quality objective limiting the "…fecal coliform concentration based on a minimum of not less than five samples for any 30-day period…" to a maximum geometric mean of 200 MPN/100 ml. The objective also states that "…[no] more than ten percent of the total number of samples taken during any 30-day period [shall] exceed 400/100 ml." This objective is included in the Order as a receiving water limitation.

3. **Dissolved Oxygen.** The unnamed tributary of the Cosumnes River has been designated as having the beneficial use of cold freshwater aquatic habitat (COLD). For water bodies designated as having COLD as a beneficial use, the Basin Plan includes a water quality objective of maintaining a minimum of 7.0 mg/L of dissolved oxygen. Since the beneficial use of COLD does apply to the unnamed tributary of the Cosumnes River, a receiving water limitation of 7.0 mg/L for dissolved oxygen was included in the Order.

   For surface water bodies outside of the Delta, the Basin Plan includes the water quality objective that "…the monthly median of the mean daily dissolved oxygen (DO) concentration shall not fall below 85 percent of saturation in the main water mass, and the 95 percentile concentration shall not fall below 75 percent of saturation." This objective was included as a receiving water limitation in the Order.

4. **pH.** For all surface water bodies in the Sacramento River and San Joaquin River basins, the Basin Plan includes water quality objectives stating that "[t]he pH shall not be depressed below 6.5 nor raised above 8.5. Changes in normal ambient pH levels shall not exceed 0.5 in fresh waters with designated COLD or WARM beneficial uses." The Order includes receiving water limitations for both pH range and pH change.

   The Basin Plan allows an appropriate averaging period for pH change in the receiving stream. Since there is no technical information available that indicates that aquatic organisms are adversely affected by shifts in pH within the 6.5 to 8.5 range, an averaging period is considered appropriate and a monthly averaging period for determining compliance with the 0.5 s.u. receiving water pH limitation is included in the Order.

5. **Temperature.** The unnamed tributary of the Cosumnes River has the beneficial uses of both COLD and WARM. The Basin Plan includes the objective that "[a]t no time or place shall the temperature of COLD or WARM intrastate waters be increased more than 5ºF above natural receiving water temperature." The Order includes a receiving water limitation based on this objective.

6. **Turbidity.** The Basin Plan includes the following objective: "*Increases in turbidity attributable to controllable water quality factors shall not exceed the following limits*:

   a. Where natural turbidity is between 0 and 5 Nephelometric Turbidity Units (NTUs), increases shall not exceed 1 NTU.

   b. Where natural turbidity is between 5 and 10 NTUs, increases shall not exceed 20 percent.

   c. Where natural turbidity is between 50 and 100 NTUs, increases shall not exceed 10 NTU.

   d. Where natural turbidity is greater than 100 NTUs, increases shall not exceed 10 percent."

B. Groundwater

1. The Basin Plan designates the beneficial uses of groundwater in the discharge area as MUN, AGR, industrial service supply (IND), and industrial process supply (PRO).

2. There is discharge to underlying groundwater from the Facility's U-shaped treatment pond, unlined fish solids drying beds, and other onsite unlined wastewater conveyance channels.

3. The following Groundwater Limitation in this Order is based on the State Antidegradation Policy, State Water Board Resolution 68-16: Release of waste constituents from any storage, treatment, or disposal component associated with the Facility shall not, in combination with other sources of the waste constituents, cause groundwater within influence of the Facility and discharge area(s) to contain waste constituents in concentrations in excess of natural background quality.

VI. RATIONALE FOR MONITORING AND REPORTING REQUIREMENTS

Section 122.48 of 40 CFR requires all NPDES permits to specify recording and reporting of monitoring results. Sections 13267 and 13383 of the California Water Code authorize the Water Boards to require technical and monitoring reports. The Monitoring and Reporting Program, Attachment E of this Order, establishes monitoring and reporting requirements to implement federal and state requirements. The following provides the rationale for the monitoring and reporting requirements contained in the Monitoring and Reporting Program for this facility.

A. Influent Monitoring

The Order establishes influent monitoring requirements to allow the Discharger to establish compliance with Total Suspended Solids net effluent limitations and to monitor the influent concentrations of EC, TDS and chlorides.

B. Effluent Monitoring

Pursuant to the requirements of 40 CFR 122.44(i)(2) effluent monitoring is required for all constituents with effluent limitations. Table F-5 summarizes the effluent monitoring required and the rationale for assigning the monitoring:

Table F-5.
Summary of Effluent Monitoring
Discharge Point 001

Parameter(s)	Monitoring Frequency	Rationale
Flow	Continuous	Determine compliance with flow limitations.
pH	1 / week	Determine compliance with instantaneous minimum and maximum effluent limitation.
Temperature, Dissolved Oxygen	1 / week	Monitoring of basic water quality parameters.
Total Suspended Solids	1 / month	Determine compliance with AMEL and MDEL.
Settleable Solids	1 / month	Determine compliance with AMEL and MDEL.
Total Iron, Total Manganese, Nitrate Nitrogen, Total Ammonia, EC	1 / month	Determine compliance with AMELs.
TDS and Chloride	1 / month	Monitor compliance with salinity limitations and determine relationship between EC and TDS.
Total Arsenic, Total Aluminum, Total Fluoride, Nitrite Nitrogen, MBAS	1 / quarter	Inconclusive preliminary monitoring suggests that effluent limitations are required for these parameters. Monitoring is assigned to gather additional information.
CBOD, Total Phosphorous	1 / quarter	USEPA identified CAAP pollutants (see Section IV.B.1.b of this Fact Sheet)

C. Whole Effluent Toxicity Testing Requirements – Not Applicable

D. Receiving Water Monitoring

1. Surface Water – Not Applicable

This Order contains receiving surface water limitations as required to comply with the Basin Plan's water quality objectives. However, receiving surface water monitoring is not feasible and, therefore, not required in this Order. Sampling for compliance with the receiving surface water limitations will be established through monitoring of the Facility's effluent.

The Facility discharges to a Sacramento County drainage ditch. Once offsite, wastewater flow continues along the natural storm drainage route, discharges to an unnamed tributary of the Consumnes River, into a pond on a neighboring parcel, and ultimately to the Consumnes River. The unnamed tributary is an ephemeral stream, containing no flow for much of the year, making upstream monitoring infeasible. Furthermore, since the discharge flows through open areas prior to entering downstream waters, impacts from any discharges entering the drainage course could mask actual impacts of the discharge on downstream waters.

2. Groundwater

Groundwater monitoring must be conducted to determine if the Facility's groundwater discharge is causing wastewater constituent concentrations in groundwater to exceed WQO(s) or otherwise not comply with Regional Water Board plans and policies, including Resolution 68-16. This Order requires the Discharger to begin groundwater monitoring and includes a regular schedule of groundwater monitoring in the Monitoring and Reporting Program, Attachment E.

The analysis shall consider all land discharges (e.g., wastewater ponds, solids drying beds, landscaped solids application areas).

Following the completion of at least eight monthly groundwater sampling events, the Discharger shall submit a background groundwater quality study report. For each groundwater monitoring parameter/constituent identified in the Monitoring and Reporting Program, the report shall present a summary of monitoring data, calculation of the concentration in background monitoring wells, and a comparison of background groundwater quality to that in wells used to monitor the facility. Determination of background quality shall be made using the methods described in Title 27, Section 20415(e)(10).

E. Other Monitoring Requirements

1. Solids Disposal Monitoring

This Order requires an annual solids disposal report describing the annual volume of solids generated by the Facility and specifying the disposal practices. This report must also include a certification that solids disposal methods were consistent with reasonable agronomic loading rates. Solids disposal monitoring is required to evaluate compliance with Construction, Operation, and Maintenance Specifications, Section VI.C.5.a, of this Order.

2. Treatment Pond Monitoring

Treatment pond monitoring is required to evaluate compliance with Construction, Operation, and Maintenance Specifications, Section VI.C.5.c, of this Order.

VII. RATIONALE FOR PROVISIONS

A. Standard Provisions

Standard Provisions, which in accordance with 40 CFR Sections 122.41and 122.42, apply to all NPDES discharges and must be included in every NPDES permit, are provided in Attachment D to the Order.

B. Special Provisions

1. Reopener Provisions

a. **Provision VI.C.1.a, Re-Opener Provision.** Conditions that necessitate a major modification of a permit are described in 40 CFR Section 122.62, which include the following:

(i) *When standards or regulations on which the permit was based have been changed by promulgation of amended standards or regulations or by judicial decision.* Therefore, if more stringent applicable water quality standards are promulgated or approved pursuant to Section 303 of the Federal Water Pollution Control Act or amendments thereto, the Regional Water Board will revise and modify this Order in accordance with such more stringent standards.

(ii) *When new information, that was not available at the time of permit issuance, would have justified different permit conditions at the time of issuance.*

b. **Provision VI.C.1.b, Chemical or Antibiotic use Re-Opener Provision.** This provision requires that the Regional Water Board reopen this Order to include additional discharge requirements should the Discharger submit the information specified in Section VI.C.2.a for the use of aquacultural chemicals or antibiotics.

c. **Provision VI.C.1.c, Studies/Monitoring Re-Opener Provision.** This provision allows the Regional Water Board to reopen this Order if review of the study results specified in Sections VI.C.2.b and VI.C.2.c of this Order or any effluent monitoring show that the discharge has reasonable potential to cause or contribute to an exceedance of a water quality objective, or the discharge is causing groundwater degradation.

d. **Provision VI.C.1.d, Salinity Study Re-Opener Provision.** This provision allows the Regional Water Board to reopen this Order if review of the salinity study results specified in Section VI.C.2.e show that additional salinity limitations are necessary to comply with Provision VI.C.3.a.i; which requires the minimization of NaCl discharge to surface waters.

e. **Provision VI.C.1.e, Transfer of Ownership Re-Opener Provision.** Tsar Nicoulai Caviar, LLC is currently negotiating the purchase of the remaining Facility property from the Ralph F. Nix 1995 Revocable Trust. This provision allows the Regional Water Board to reopen this Order to remove the Ralph F. Nix 1995 Revocable Trust as a Discharger named to this Order; if sole ownership of the Facility property is transferred to Tsar Nicoulai Caviar, LLC.

f. **Final Effluent Limitation IV.A.1.c, Narrative TSS limitation.** This Order implements a narrative technology-based effluent limitation for TSS in accordance with the federal ELG specified in 40 CFR Part 451. This provision allows the Regional Water Board to establish more stringent requirements, including establishing numeric WQBELs, if monitoring data submitted by the Discharger or collected by the Regional Board determines more stringent requirements are necessary to protect water quality.

.

2. Special Studies and Additional Monitoring Requirements

a. **Provision VI.C.2.a, Chemical and Aquaculture Drug Reporting Requirements.** As described in Section IV.B.1 of this Fact Sheet, the final ELG includes the following reporting and narrative requirements for CAAP facilities that are subject to 40 CFR Part 451:

- Must notify the permitting authority of the use of any investigational new animal drug (INAD) and any extralabel drug use where the use may lead to a discharge to waters of the United States.
- Reporting requirement for failure in or damage to the structure of an aquatic animal containment system, resulting in an unanticipated material discharge of pollutant to waters of the United States.
- Develop and maintain a best management practice (BMP) plan for solids control, material storage, structural maintenance, record keeping, and training.

Prior to using any new chemical or aquaculture drug at the Facility, the Discharger is required to submit to the Regional Water Board a RWD and be issued waste discharge requirements and/or NPDES permit authorizing the discharge. The RWD must contain the reporting and toxicity testing of the new chemical or aquaculture drug as specified

in Section VI.C.2.a of this Order. These reporting and toxicity testing requirements are needed for the Regional Water Board to determine if the discharge of a new drug or chemical by the Facility has reasonable potential to cause, or contribute to an in-stream excursion above any chemical-specific water quality criteria, narrative water quality objective for chemical constituents from the Basin Plan, or narrative water quality objective for toxicity from the Basin Plan.

b. **Provision VI.C.2.b, Priority Pollutants.** According to Section 1.2 of the SIP, the Discharger must report data for all the priority pollutants listed in the CTR. The data are used to determine reasonable potential for these constituents to cause or contribute to an exceedance of applicable water quality criteria and to calculate effluent limitations. The Discharger has sampled the effluent once for most priority pollutants, but has not submitted enough data to adequately characterize the discharge. Provision VI.C.2.b of this Order requires the Discharger to provide additional priority pollutant data for the effluent.

c. **Provision VI.C.2.c, Groundwater Monitoring.** Provision VI.C.2.c requires the Discharger to install monitoring wells and implement a groundwater monitoring program to begin characterizing background groundwater quality to determine whether the Facility's discharge is causing groundwater degradation.

d. **Provision VI.C.2.d, Mosquito and Vector Control Plan.** Based on findings from facility site visits and inspections, the current operational and site conditions at the Facility indicate excessive standing water and vegetation that is conducive to habitats for mosquitoes and other vectors and may result in the Facility creating a condition of nuisance. Surrounding landowners have complained about mosquito problems originating at the Facility. Provisions VI.C.5.c and VI.C.5.d require the Discharger to submit a plan that is approved by the Sacramento-Yolo Mosquito and Vector Control District to immediately address the conditions at the site and implement adequate operation and maintenance practices to ensure the Facility does not create a condition of nuisance.

e. **Provision VI.C.2.e, Salinity Discharge Study. Due to limited monitoring data available to the Regional Board during the development of this Order, this Order establishes a maximum allowable EC effluent limitation.** Provision VI.C.2.e requires that the Discharger characterize source water and effluent salinity to determine compliance with Provision VI.C.3.a.i, requiring the minimization of salt discharged to receiving waters, and also to provide monitoring data to evaluate the need to establish a more stringent effluent limitation for EC.

3. Best Management Practices and Pollution Prevention

a. **Provision VI.C.3.a, Best Management Practices.** Best Management Practices plan requirements are established based on requirements in Effluent Limitations Guidelines and New Source Performance Standards for the Concentrated Aquatic Animal Production Point Source Category at 40 CFR 451. CAAP facilities that are subject to the federal ELG are required to develop and maintain a BMP plan that address the

following requirements: solids control, material storage, structural maintenance, record-keeping, and training. The Discharger must make the BMP plan available to the Regional Water Board upon request, and submit certification that the BMP plan has been developed.

b. **Stormwater Requirements.** Storm water discharges from the Facility are not required to be regulated under the General Permit for Discharges of Storm Water Associated with Industrial Activities (State Water Resources Control Board, Water Quality Order No. 97-03-DWQ, NPDES General Permit No. CAS000001).

4. Compliance Schedules – Not Applicable

5. Construction, Operation, and Maintenance Specifications

a. **Provisions VI.C.5.a,b.** Solid waste disposal provisions in this Order are based on the requirements of CCR Title 27 and prevention of unauthorized discharge of solid wastes into waters of the United States or waters of the State. Other construction, operation, and maintenance specifications are to prevent other unauthorized discharges to waters of the United States or waters of the State.

b. **Provision VI.C.5.c, Treatment Pond Specifications.** These provisions are operational requirements for the treatment pond. These requirements are similar to those required for Publicly Owned Treatment Works (POTWs) wastewater treatment and disposal ponds.

c. **Provision VI.C.5.d, Mosquito Control.** These provisions require that the Discharger manage the Facility's ponds and grounds to prevent the breeding of mosquitoes.

6. Special Provisions for Municipal Facilities (POTWs Only) – Not Applicable

7. Other Special Provisions

Other special provisions in this Order include specific requirements for change of discharge point and change of ownership.

VIII. PUBLIC PARTICIPATION

The California Regional Water Quality Control Board, Central Valley Region (Regional Water Board) is considering the issuance of waste discharge requirements (WDRs) that will serve as a National Pollutant Discharge Elimination System (NPDES) permit for the Tsar Nicoulai Sturgeon Farm. As a step in the WDR adoption process, the Regional Water Board staff has developed tentative WDRs. The Regional Water Board encourages public participation in the WDR adoption process.

A. Notification of Interested Parties

The Regional Water Board has notified the Discharger and interested agencies and persons of its intent to prescribe waste discharge requirements for the discharge and has provided them with an opportunity to submit their written comments and recommendations.

B. Written Comments

The staff determinations are tentative. Interested persons are invited to submit written comments concerning these tentative WDRs. Comments should be submitted either in person or by mail to the Executive Office at the Regional Water Board at the address above on the cover page of this Order.

To be fully responded to by staff and considered by the Regional Water Board, written comments should be received at the Regional Water Board offices by 5:00 p.m. on **June 6, 2005.**

C. Public Hearing

The Regional Water Board will hold a public hearing on the tentative WDRs during its regular Board meeting on the following date and time and at the following location:

Date: **June 23/24, 2005**
Time: 8:30 am
Location: Regional Water Quality Control Board
11020 Sun Center Dr #200
Rancho Cordova, CA

Interested persons are invited to attend. At the public hearing, the Regional Water Board will hear testimony, if any, pertinent to the discharge, WDRs, and permit. Oral testimony will be heard; however, for accuracy of the record, important testimony should be in writing.

Please be aware that dates and venues may change. Our web address is http://www.waterboards.ca.gov/centralvalley/ where you can access the current agenda for changes in dates and locations.

D. Waste Discharge Requirements Petitions

Any aggrieved person may petition the State Water Resources Control Board to review the decision of the Regional Water Board regarding the final WDRs. The petition must be submitted within 30 days of the Regional Water Board's action to the following address:

State Water Resources Control Board
Office of Chief Counsel
P.O. Box 100, 1001 I Street
Sacramento, CA 95812-0100

E. Information and Copying

The RWD, related documents, tentative effluent limitations and special provisions, comments received, and other information are on file and may be inspected at the address above at any time between 8:30 a.m. and 4:45 p.m., Monday through Friday. Copying of documents may be arranged through the Regional Water Board by calling (916) 464-3291.

F. Register of Interested Persons

Any person interested in being placed on the mailing list for information regarding the WDRs and NPDES permit should contact the Regional Water Board, reference this facility, and provide a name, address, and phone number.

G. Additional Information

Requests for additional information or questions regarding this order should be directed to Pat Leary at (916) 464-4623.

ATTACHMENT G – CTR MONITORING

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
VOLATILE ORGANICS						
28	1,1-Dichloroethane	75343	Primary MCL	5	0.5	EPA 8260B
30	1,1-Dichloroethene	75354	National Toxics Rule	0.057	0.5	EPA 8260B
41	1,1,1-Trichloroethane	71556	Primary MCL	200	0.5	EPA 8260B
42	1,1,2-Trichloroethane	79005	National Toxics Rule	0.6	0.5	EPA 8260B
37	1,1,2,2-Tetrachloroethane	79345	National Toxics Rule	0.17	0.5	EPA 8260B
75	1,2-Dichlorobenzene	95501	Taste & Odor	10	0.5	EPA 8260B
29	1,2-Dichloroethane	107062	National Toxics Rule	0.38	0.5	EPA 8260B
	cis-1,2-Dichloroethene	156592	Primary MCL	6	0.5	EPA 8260B
31	1,2-Dichloropropane	78875	Calif. Toxics Rule	0.52	0.5	EPA 8260B
101	1,2,4-Trichlorobenzene	120821	Public Health Goal	5	0.5	EPA 8260B
76	1,3-Dichlorobenzene	541731	Taste & Odor	10	0.5	EPA 8260B
32	1,3-Dichloropropene	542756	Primary MCL	0.5	0.5	EPA 8260B
77	1,4-Dichlorobenzene	106467	Primary MCL	5	0.5	EPA 8260B
17	Acrolein	107028	Aquatic Toxicity	21	5	EPA 8260B
18	Acrylonitrile	107131	National Toxics Rule	0.059	2	EPA 8260B
19	Benzene	71432	Primary MCL	1	0.5	EPA 8260B
20	Bromoform	75252	Calif. Toxics Rule	4.3	0.5	EPA 8260B
34	Bromomethane	74839	Calif. Toxics Rule	48	1	EPA 8260B
21	Carbon tetrachloride	56235	National Toxics Rule	0.25	0.5	EPA 8260B
22	Chlorobenzene (mono chlorobenzene)	108907	Taste & Odor	50	0.5	EPA 8260B
24	Chloroethane	75003	Taste & Odor	16	0.5	EPA 8260B
25	2- Chloroethyl vinyl ether	110758	Aquatic Toxicity	122 (3)	1	EPA 8260B
26	Chloroform	67663	OEHHA Cancer Risk	1.1	0.5	EPA 8260B
35	Chloromethane	74873	USEPA Health Advisory	3	0.5	EPA 8260B
23	Dibromochloromethane	124481	Calif. Toxics Rule	0.41	0.5	EPA 8260B
27	Dichlorobromomethane	75274	Calif. Toxics Rule	0.56	0.5	EPA 8260B
36	Dichloromethane	75092	Calif. Toxics Rule	4.7	0.5	EPA 8260B

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
33	Ethylbenzene	100414	Taste & Odor	29	0.5	EPA 8260B
88	Hexachlorobenzene	118741	Calif. Toxics Rule	0.00075	1	EPA 8260B
89	Hexachlorobutadiene	87683	National Toxics Rule	0.44	1	EPA 8260B
91	Hexachloroethane	67721	National Toxics Rule	1.9	1	EPA 8260B
94	Naphthalene	91203	USEPA IRIS	14	10	EPA 8260B
38	Tetrachloroethene	127184	National Toxics Rule	0.8	0.5	EPA 8260B
39	Toluene	108883	Taste & Odor	42	0.5	EPA 8260B
40	trans-1,2-Dichloroethylene	156605	Primary MCL	10	0.5	EPA 8260B
43	Trichloroethene	79016	National Toxics Rule	2.7	0.5	EPA 8260B
44	Vinyl chloride	75014	Primary MCL	0.5	0.5	EPA 8260B
	Methyl-tert-butyl ether (MTBE)	1634044	Secondary MCL	5	0.5	EPA 8260B
	Trichlorofluoromethane	75694	Primary MCL	150	5	EPA 8260B
	1,1,2-Trichloro-1,2,2-Trifluoroethane	76131	Primary MCL	1200	10	EPA 8260B
	Styrene	100425	Taste & Odor	11	0.5	EPA 8260B
	Xylenes	1330207	Taste & Odor	17	0.5	EPA 8260B
SEMI-VOLATILE ORGANICS						
60	1,2-Benzanthracene	56553	Calif. Toxics Rule	0.0044	5	EPA 8270C
85	1,2-Diphenylhydrazine	122667	National Toxics Rule	0.04	1	EPA 8270C
45	2-Chlorophenol	95578	Taste and Odor	0.1	2	EPA 8270C
46	2,4-Dichlorophenol	120832	Taste and Odor	0.3	1	EPA 8270C
47	2,4-Dimethylphenol	105679	Calif. Toxics Rule	540	2	EPA 8270C
49	2,4-Dinitrophenol	51285	National Toxics Rule	70	5	EPA 8270C
82	2,4-Dinitrotoluene	121142	National Toxics Rule	0.11	5	EPA 8270C
55	2,4,6-Trichlorophenol	88062	Taste and Odor	2	10	EPA 8270C
83	2,6-Dinitrotoluene	606202	USEPA IRIS	0.05	5	EPA 8270C
50	2-Nitrophenol	25154557	Aquatic Toxicity	150 (5)	10	EPA 8270C
71	2-Chloronaphthalene	91587	Aquatic Toxicity	1600 (6)	10	EPA 8270C
78	3,3'-Dichlorobenzidine	91941	National Toxics Rule	0.04	5	EPA 8270C
62	3,4-Benzofluoranthene	205992	Calif. Toxics Rule	0.0044	10	EPA 8270C

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
52	4-Chloro-3-methylphenol	59507	Aquatic Toxicity	30	5	EPA 8270C
48	4,6-Dinitro-2-methylphenol	534521	National Toxics Rule	13.4	10	EPA 8270C
51	4-Nitrophenol	100027	USEPA Health Advisory	60	5	EPA 8270C
69	4-Bromophenyl phenyl ether	101553	Aquatic Toxicity	122	10	EPA 8270C
72	4-Chlorophenyl phenyl ether	7005723	Aquatic Toxicity	122 (3)	5	EPA 8270C
56	Acenaphthene	83329	Taste and Odor	20	1	EPA 8270C
57	Acenaphthylene	208968	No Criteria Available		10	EPA 8270C
58	Anthracene	120127	Calif. Toxics Rule	9,600	10	EPA 8270C
59	Benzidine	92875	National Toxics Rule	0.00012	5	EPA 8270C
61	Benzo(a)pyrene (3,4-Benzopyrene)	50328	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
63	Benzo(g,h,i)perylene	191242	No Criteria Available		5	EPA 8270C
64	Benzo(k)fluoranthene	207089	Calif. Toxics Rule	0.0044	2	EPA 8270C
65	Bis(2-chloroethoxy) methane	111911	No Criteria Available		5	EPA 8270C
66	Bis(2-chloroethyl) ether	111444	National Toxics Rule	0.031	1	EPA 8270C
67	Bis(2-chloroisopropyl) ether	39638329	Aquatic Toxicity	122 (3)	10	EPA 8270C
68	Bis(2-ethylhexyl) phthalate	117817	National Toxics Rule	1.8	3	EPA 8270C
70	Butyl benzyl phthalate	85687	Aquatic Toxicity	3 (7)	10	EPA 8270C
73	Chrysene	218019	Calif. Toxics Rule	0.0044	5	EPA 8270C
81	Di-n-butylphthalate	84742	Aquatic Toxicity	3 (7)	10	EPA 8270C
84	Di-n-octylphthalate	117840	Aquatic Toxicity	3 (7)	10	EPA 8270C
74	Dibenzo(a,h)-anthracene	53703	Calif. Toxics Rule	0.0044	0.1	EPA 8270C
79	Diethyl phthalate	84662	Aquatic Toxicity	3 (7)	2	EPA 8270C
80	Dimethyl phthalate	131113	Aquatic Toxicity	3 (7)	2	EPA 8270C
86	Fluoranthene	206440	Calif. Toxics Rule	300	10	EPA 8270C
87	Fluorene	86737	Calif. Toxics Rule	1300	10	EPA 8270C
90	Hexachlorocyclopentadiene	77474	Taste and Odor	1	1	EPA 8270C
92	Indeno(1,2,3-c,d)pyrene	193395	Calif. Toxics Rule	0.0044	0.05	EPA 8270C
93	Isophorone	78591	National Toxics Rule	8.4	1	EPA 8270C
98	N-Nitrosodiphenylamine	86306	National Toxics Rule	5	1	EPA 8270C
96	N-Nitrosodimethylamine	62759	National Toxics Rule	0.00069	5	EPA 8270C

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
97	N-Nitrosodi-n-propylamine	621647	Calif. Toxics Rule	0.005	5	EPA 8270C
95	Nitrobenzene	98953	National Toxics Rule	17	10	EPA 8270C
53	Pentachlorophenol	87865	Calif. Toxics Rule	0.28	0.2	EPA 8270C
99	Phenanthrene	85018	No Criteria Available		5	EPA 8270C
54	Phenol	108952	Taste and Odor	5	1	EPA 8270C
100	Pyrene	129000	Calif. Toxics Rule	960	10	EPA 8270C
INORGANICS						
	Aluminum	7429905	Ambient Water Quality	87	50	EPA 6020/200.8
1	Antimony	7440360	Primary MCL	6	5	EPA 6020/200.8
2	Arsenic	7440382	Ambient Water Quality	0.018	1	EPA 1632
15	Asbestos	1332214	National Toxics Rule/ Primary MCL	7 MFL	0.2 MFL >10um	EPA/600/R-93/116(PCM)
	Barium	7440393	Basin Plan Objective	100	100	EPA 6020/200.8
3	Beryllium	7440417	Primary MCL	4	1	EPA 6020/200.8
4	Cadmium	7440439	Public Health Goal	0.07	0.25	EPA 1638/200.8
5a	Chromium (total)	7440473	Primary MCL	50	2	EPA 6020/200.8
5b	Chromium (VI)	18540299	Public Health Goal	0.2	5	EPA 7199/ 1636
6	Copper	7440508	National Toxics Rule	4.1 (2)	0.5	EPA 6020/200.8
14	Cyanide	57125	National Toxics Rule	5.2	5	EPA 9012A
	Fluoride	7782414	Public Health Goal	1000	100	EPA 300
	Iron	7439896	Secondary MCL	300	100	EPA 6020/200.8
7	Lead	7439921	Calif. Toxics Rule	0.92 (2)	0.5	EPA 1638
8	Mercury	7439976	TMDL Development		0.0005 (11)	EPA 1669/1631
	Manganese	7439965	Secondary MCL/ Basin Plan Objective	50	20	EPA 6020/200.8
9	Nickel	7440020	Calif. Toxics Rule	24 (2)	5	EPA 6020/200.8
10	Selenium	7782492	Calif. Toxics Rule	5 (8)	5	EPA 6020/200.8
11	Silver	7440224	Calif. Toxics Rule	0.71 (2)	1	EPA 6020/200.8
12	Thallium	7440280	National Toxics Rule	1.7	1	EPA 6020/200.8
	Tributyltin	688733	Ambient Water Quality	0.063	0.06	EV-024/025
13	Zinc	7440666	Calif. Toxics Rule/ Basin Plan Objective	54/ 16 (2)	10	EPA 6020/200.8

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
PESTICIDES - PCBs						
110	4,4'-DDD	72548	Calif. Toxics Rule	0.00083	0.02	EPA 8081A
109	4,4'-DDE	72559	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
108	4,4'-DDT	50293	Calif. Toxics Rule	0.00059	0.01	EPA 8081A
112	alpha-Endosulfan	959988	National Toxics Rule	0.056 (9)	0.02	EPA 8081A
103	alpha-Hexachlorocyclohexane (BHC)	319846	Calif. Toxics Rule	0.0039	0.01	EPA 8081A
	Alachlor	15972608	Primary MCL	2	1	EPA 8081A
102	Aldrin	309002	Calif. Toxics Rule	0.00013	0.005	EPA 8081A
113	beta-Endosulfan	33213659	Calif. Toxics Rule	0.056 (9)	0.01	EPA 8081A
104	beta-Hexachlorocyclohexane	319857	Calif. Toxics Rule	0.014	0.005	EPA 8081A
107	Chlordane	57749	Calif. Toxics Rule	0.00057	0.1	EPA 8081A
106	delta-Hexachlorocyclohexane	319868	No Criteria Available		0.005	EPA 8081A
111	Dieldrin	60571	Calif. Toxics Rule	0.00014	0.01	EPA 8081A
114	Endosulfan sulfate	1031078	Ambient Water Quality	0.056	0.05	EPA 8081A
115	Endrin	72208	Calif. Toxics Rule	0.036	0.01	EPA 8081A
116	Endrin Aldehyde	7421934	Calif. Toxics Rule	0.76	0.01	EPA 8081A
117	Heptachlor	76448	Calif. Toxics Rule	0.00021	0.01	EPA 8081A
118	Heptachlor Epoxide	1024573	Calif. Toxics Rule	0.0001	0.01	EPA 8081A
105	Lindane (gamma-Hexachlorocyclohexane)	58899	Calif. Toxics Rule	0.019	0.019	EPA 8081A
119	PCB-1016	12674112	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
120	PCB-1221	11104282	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
121	PCB-1232	11141165	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
122	PCB-1242	53469219	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
123	PCB-1248	12672296	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
124	PCB-1254	11097691	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
125	PCB-1260	11096825	Calif. Toxics Rule	0.00017 (10)	0.5	EPA 8082
126	Toxaphene	8001352	Calif. Toxics Rule	0.0002	0.5	EPA 8081A
	Atrazine	1912249	Public Health Goal	0.15	1	EPA 8141A
	Bentazon	25057890	Primary MCL	18	2	EPA 643/ 515.2

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
	Carbofuran	1563662	CDFG Hazard Assess.	0.5	5	EPA 8318
	2,4-D	94757	Primary MCL	70	10	EPA 8151A
	Dalapon	75990	Ambient Water Quality	110	10	EPA 8151A
	1,2-Dibromo-3-chloropropane (DBCP)	96128	Public Health Goal	0.0017	0.01	EPA 8260B
	Di(2-ethylhexyl)adipate	103231	USEPA IRIS	30	5	EPA 8270C
	Dinoseb	88857	Primary MCL	7	2	EPA 8151A
	Diquat	85007	Ambient Water Quality	0.5	4	EPA 8340/ 549.1/HPLC
	Endothal	145733	Primary MCL	100	45	EPA 548.1
	Ethylene Dibromide	106934	OEHHA Cancer Risk	0.0097	0.02	EPA 8260B/ 504
	Glyphosate	1071836	Primary MCL	700	25	HPLC/ EPA 547
	Methoxychlor	72435	Public Health Goal	30	10	EPA 8081A
	Molinate (Ordram)	2212671	CDFG Hazard Assess.	13	2	EPA 634
	Oxamyl	23135220	Public Health Goal	50	20	EPA 8318/ 632
	Picloram	1918021	Primary MCL	500	1	EPA 8151A
	Simazine (Princep)	122349	USEPA IRIS	3.4	4	EPA 8141A
	Thiobencarb	28249776	Basin Plan Objective/ Secondary MCL	1	1	HPLC/ EPA 639
16	2,3,7,8-TCDD (Dioxin)	1746016	Calif. Toxics Rule	1.30E-08	5.00E-06	EPA 8290 (HRGC) MS
	2,4,5-TP (Silvex)	93765	Ambient Water Quality	10	1	EPA 8151A
	Diazinon	333415	CDFG Hazard Assess.	0.05	0.25	EPA 8141A/ GCMS
	Chlorpyrifos	2921882	CDFG Hazard Assess.	0.014	1	EPA 8141A/ GCMS
OTHER CONSTITUENTS						
	Ammonia (as N)	7664417	Ambient Water Quality	1500 (4)		EPA 350.1
	Chloride	16887006	Agricultural Use	106,000		EPA 300.0
	Flow			1 CFS		
	Hardness (as $CaCO_3$)			5000		EPA 130.2
	Foaming Agents (MBAS)		Secondary MCL	500		SM5540C
	Nitrate (as N)	14797558	Primary MCL	10,000	2,000	EPA 300.0

CTR #	Constituent	CAS Number	Basis	Criterion Concentration (ug/L or noted) (1)	Criterion Quantitation Limit (ug/L or noted)	Suggested Test Methods
	Nitrite (as N)	14797650	Primary MCL	1000	400	EPA 300.0
	pH		Basin Plan Objective	6.5-8.5	0.1	EPA 150.1
	Phosphorus, Total (as P)	7723140	USEPA IRIS	0.14		EPA 365.3
	Specific conductance (EC)		Agricultural Use	700 umhos/cm		EPA 120.1
	Sulfate		Secondary MCL	250,000	500	EPA 300.0
	Sulfide (as S)		Taste and Odor	0.029		EPA 376.2
	Sulfite (as SO_3)		No Criteria Available			SM4500-SO3
	Temperature		Basin Plan Objective	^{o}F		
	Total Disolved Solids (TDS)		Agricultural Use	450,000		EPA 160.1

FOOTNOTES:

(1) - The Criterion Concentrations serve only as a point of reference for the selection of the appropriate analytical method. They do not indicate a regulatory decision that the cited concentration is either necessary or sufficient for full protection of beneficial uses. Available technology may require that effluent limits be set lower than these values.

(2) - Freshwater aquatic life criteria for metals are expressed as a function of total hardness (mg/L) in the water body. Values displayed correspond to a total hardness of 40 mg/L.

(3) - For haloethers

(4) - Freshwater aquatic life criteria for ammonia are expressed as a function of pH and temperature of the water body. Values displayed correspond to pH 8.0 and temperature of 22 C.

(5) - For nitrophenols.

(6) - For chlorinated naphthalenes.

(7) - For phthalate esters.

(8) - Basin Plan objective = 2 ug/L for Salt Slough and specific constructed channels in the Grassland watershed.

(9) - Criteria for sum of alpha- and beta- forms.

(10) - Criteria for sum of all PCBs.

(11) - Mercury monitoring shall utilize "ultra-clean" sampling and analytical methods. These methods include:

Method 1669: Sampling Ambient Water for Trace Metals at EPA Water Quality Criteria Levels, US EPA; and

Method 1631: Mercury in Water by Oxidation, Purge and Trap, and Cold Vapor Atomic Fluoresence, US EPA

ATTACHMENT H – DRUG AND CHEMICAL USAGE REPORT TABLE

Quarterly Drug and Chemical Use Report Facility Name:Tsar Nicoulai Sturgeon Farm

Name of Drug or Chemical, and Active Ingredient	Date(s) of Application	Location and Purpose of Application	Method of Application or Treatment	Duration of Treatment	Static or Flush Treatment	Total Amount Applied	Flow in Treatment Unit (cfs)	Total Facility Flow (cfs)	Method of Disposal for Used Drug or Chemical
EXAMPLE: Salt, active ingredient sodium chloride	9/1/05 to 9/4/05	Tank Nos. 1,2 Infection treatment	Added directly to water in tanks.	3 days	Flush	200 pounds per tank per day = 200 x 2 x 3 = 1200 pounds total	5 cfs	28 cfs	Discharged via Discharge Point 001.

ATTACHMENT I – ITEMS TO BE INCLUDED IN A MONITORING WELL INSTALLATION WORKPLAN AND A MONITORING WELL INSTALLATION REPORT OF RESULTS

Prior to installation of groundwater monitoring wells, the Discharger shall submit a workplan containing the minimum listed information. Wells may be installed after staff approves the workplan. Upon installation of the monitoring wells, the Discharger shall submit a report of results, as described below. All workplans and reports must be signed by a registered geologist, certified engineering geologist, or civil engineer registered or certified by the State of California.

SECTION 1 - Monitoring Well Installation Workplan

A. General Information:

- Purpose of well installation project
- Copies of County Well Construction Permits (to be submitted after workplan review)
- Monitoring well locations and rationale
- Survey details
- Equipment decontamination procedures
- Health and safety plan
- Topographic map showing any existing wells, proposed wells, waste handling facilities, utilities, and other major physical and man-made features.

B. Drilling Details:

- Describe drilling technique
- Sampling intervals, and logging methods
- Cuttings storage and disposal

C. Monitoring Well Design:

- Casing diameter and centralizer spacing (if needed)
- Borehole diameter
- Depth of surface seal
- Well construction materials
- Diagram of proposed well construction details
- Type of well cap, bottom cap either screw on or secured with stainless steel screws
- Size of perforations and rationale
- Grain size of sand pack and rationale
- Thickness and position of bentonite seal and sand pack
- Depth of well, length and position of perforated interval

D. Well Development:

- Require a minimum of 48 hours prior to development activities
- Method of development to be used
- Method of determining when development is complete
- Parameters to be monitored during development
- Method of development water storage and disposal

E. Well Survey:
- Identify the Licensed Land Surveyor or Civil Engineer that will perform the survey
- Describe what well features will be surveyed (i.e. top of casing, horizontal and vertical coordinates, etc.)
- Vertical accuracy shall be to at least 0.01 foot

F. Soil Sampling (if applicable):
- Analyses to be run and methods
- Sample containers, collection method, and preservation method
- Table describing sample volumes, sample containers, preservation agents, and hold times
- Intervals at which soil samples are to be collected
- Number of soil samples to be analyzed and rationale
- Location of soil samples and rationale
- QA/QC procedures

G. Well Sampling:
- Minimum time after development before sampling (48 hours)
- Well purging method and amount of purge water
- Sample containers, collection method, and preservation method
- Table describing sample volumes, sample containers, preservation agents, and hold times
- QA/QC procedures

H. Water Level Measurement:
- The elevation reference point at each monitoring well shall be within 0.01 foot.
- Ground surface elevation at each monitoring well shall be within 0.01 foot.
- Method and time of water level measurement shall be specified.

I. Proposed time schedule for work.

SECTION 2 – Groundwater Sampling and Analysis Plan

A. General Information:
- Purpose of well sampling
- Site Location
- Monitoring well locations
- Monitoring well construction details including elevation, well depth, casing material and size, and screen interval
- Equipment decontamination procedures
- Health and safety plan
- Topographic map showing any existing wells, proposed wells, waste handling facilities, utilities, and other major physical and man-made features.

B. Water Level Measurement:
- Ground surface elevation at each monitoring well shall be within 0.01 foot.
- Method and time of water level measurement shall be specified
- Water level in well shall be allowed to equilibrate prior to measuring the depth to water

C. Well Sampling:

- Well purging method and amount of purge water, purge water storage
- Sample containers, collection method, and preservation method
- Table describing sample volumes, sample containers, preservation agents, and hold times
- Identification of analytical laboratory
- Chain of custody procedures
- QA/QC procedures

D. Proposed time schedule for work.

SECTION 3 - Monitoring Well Installation Report of Results

A. Well Construction:

- Number and depth of wells drilled
- Date(s) wells drilled and completed
- Description of drilling and construction
- Locations relative to facility features such as buildings, storage ponds, waste piles, etc.
- A well construction diagram for each well must be included in the report, and should contain the following details:

  Drilling Contractor and driller name
  Depth of open hole (same as total depth drilled if no caving occurs)
  Method and materials of grouting excess borehole
  Footage of hole collapsed
  Length of slotted casing installed
  Depth of bottom of casing
  Depth to top of sand pack
  Thickness of sand pack
  Depth to top of bentonite seal
  Thickness of bentonite seal
  Thickness of concrete grout
  Boring diameter
  Casing diameter
  Casing material
  Size of perforations
  Number of bags of sand
  Well elevation at top of casing
  Depth to ground water
  Date of water level measurement
  Monitoring well number
  Date drilled
  Location

B. Well Development:

- Date(s) of development of each well
- Method of development

- Volume of water purged from well
- How well development completion was determined
- Method of effluent disposal
- Field notes from well development should be included in report.

C. Well Survey:
- Identify the coordinate system or reference points
- Survey the well casing will the cap removed (horizontal and vertical coordinates)
- Include the Registered Engineer or Licensed Surveyor's report and field notes in appendix
- Describe the measuring points (i.e. ground surface, top of casing, etc.)
- Present the well survey report data in a table

D. Water Sampling:
- Date(s) of sampling
- How well was purged
- How many well volumes purged
- Levels of temperature, EC, and pH at stabilization
- Sample collection, handling, and preservation methods
- Sample identification
- Analytical methods used
- Laboratory analytical data sheets
- Water level elevation(s)
- Groundwater contour map

E. Soil Sampling (if applicable):
- Date(s) of sampling
- Sample collection, handling, and preservation method
- Sample identification
- Analytical methods used
- Laboratory analytical data sheets